MAGNAVOX

SERVICE MANUAL

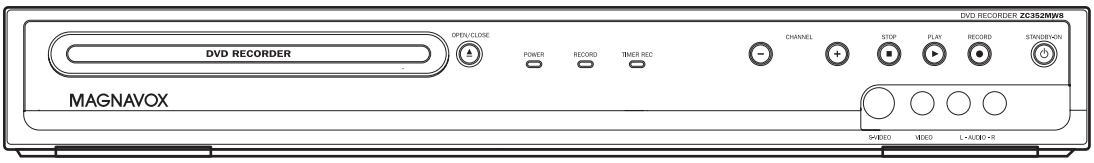
DVD RECORDER

ZC352MW8

PROGRESSIVE SCAN

DVD+ReWritable

STANDARD DEFINITION TELEVISION



IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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SPECIFICATIONS

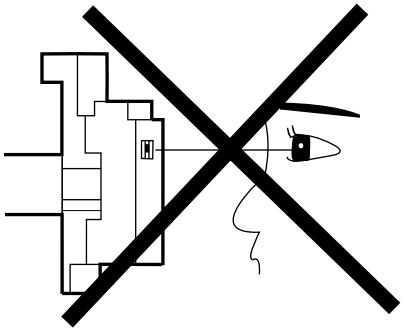
Item	Conditions	Unit	Nominal	Limit
1. VIDEO				
1-1. Video Output	75 Ω load	Vp-p	1.0	
1-2. S-Video Output				
Y (Luminance)	75 Ω load	Vp-p	1.0	
C (Chrominance)	75 Ω load	Vp-p	0.286	
1-3. Component Output				
Y (Luminance)	75 Ω load	Vp-p	1.0	
Cb (U)	75 Ω load	Vp-p	0.7	
Cr (V)	75 Ω load	Vp-p	0.7	
2. AUDIO				
2-1. Output Level		Vrms	2.0	
2-2. Frequency Response				
DVD-VIDEO LPCM	fs = 96 kHz	Hz	4 - 44 k	
	fs = 48 kHz	Hz	4 - 22 k	
Audio CD	fs = 44.1 kHz	Hz	4 - 20 k	
2-3. Signal/Noise Ratio				
DVD-VIDEO LPCM	A-Weight + SPCL20kHz	dB	120	
CD	A-Weight + SPCL20kHz	dB	120	
REC & Playback	Input: 2 Vrms, Rec Speed: XP	dB	96	
2-4. Dynamic Range				
DVD-VIDEO LPCM		dB	102	
CD		dB	98	
REC & Playback	Input: 2 Vrms, Rec Speed: XP	dB	95	
2-5. THD+N	1 kHz, 0 dB			
DVD-VIDEO LPCM		%	0.002	
CD		%	0.0025	
REC & Playback	Input: 2 Vrms, Rec Speed: XP	%	0.004	

Notes:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: AC 120 V, 60 Hz
3. Load imp.: 100 kΩ
4. Room ambient: 5 °C ~ 40 °C

LASER BEAM SAFETY PRECAUTIONS

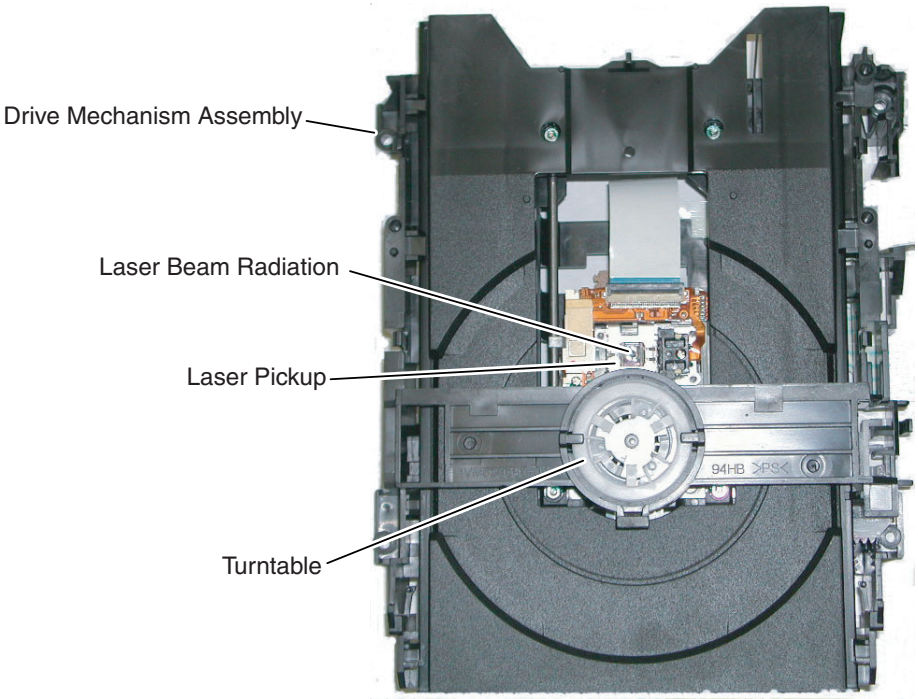
This DVD player uses a pickup that emits a laser beam.

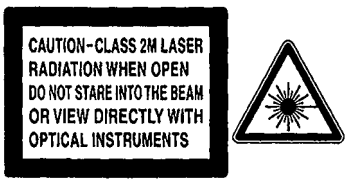


Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

CAUTION: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.





Location: Inside Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements. Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation tape
2) PVC tubing
3) Spacers
4) Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure
1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector. (Discard it.)
2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1: Ratings for selected area

AC Line Voltage	Clearance Distance (d), (d')
120 V	≥ 3.2 mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

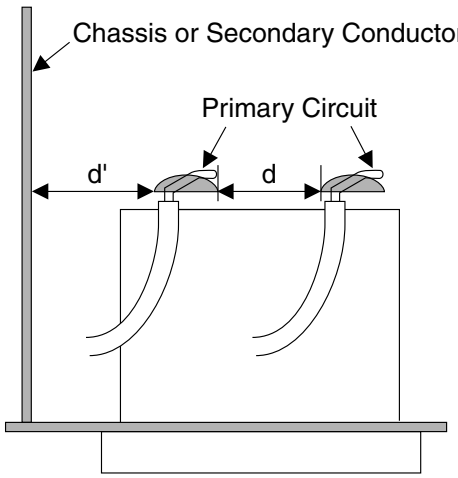


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON):

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

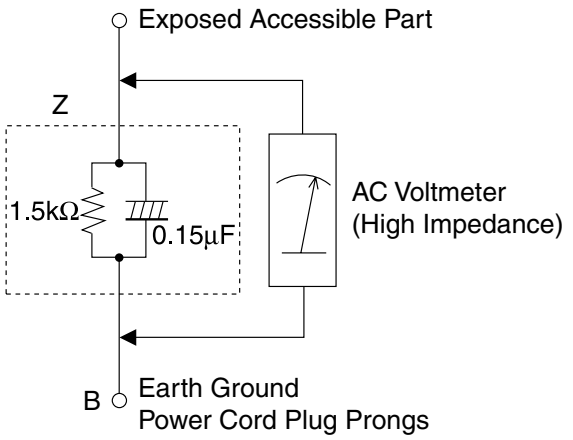


Fig. 2

Table 2: Leakage current ratings for selected areas

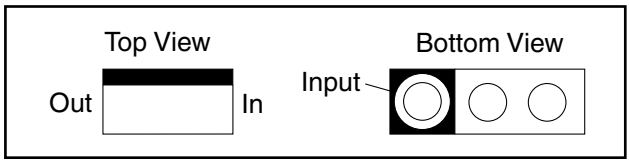
AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
120 V	0.15 μF CAP. & 1.5 kΩ RES. Connected in parallel	i ≤ 0.5 mA Peak	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

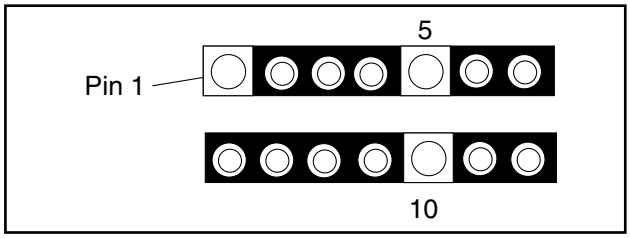
STANDARD NOTES FOR SERVICING

Circuit Board Indications

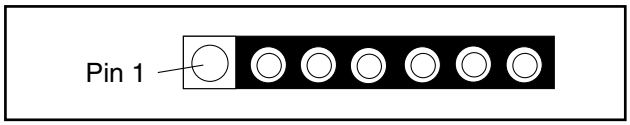
1. The output pin of the 3 pin Regulator ICs is indicated as shown.



2. For other ICs, pin 1 and every fifth pin are indicated as shown.

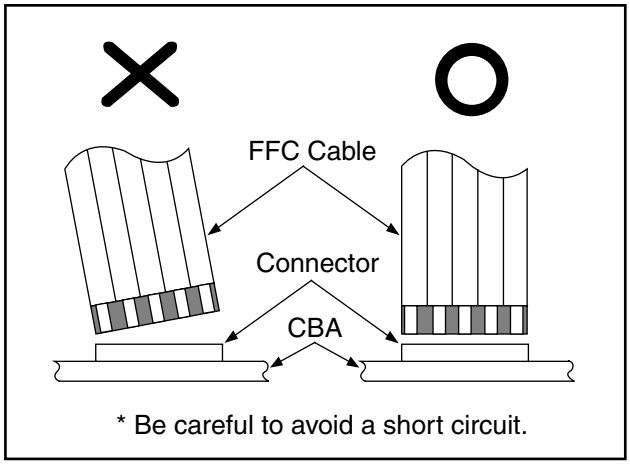


3. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



Pb (Lead) Free Solder

When soldering, be sure to use the Pb free solder.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

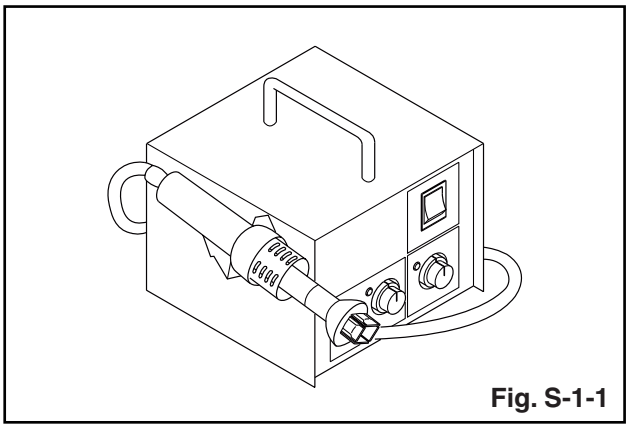


Fig. S-1-1

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

CAUTION:

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

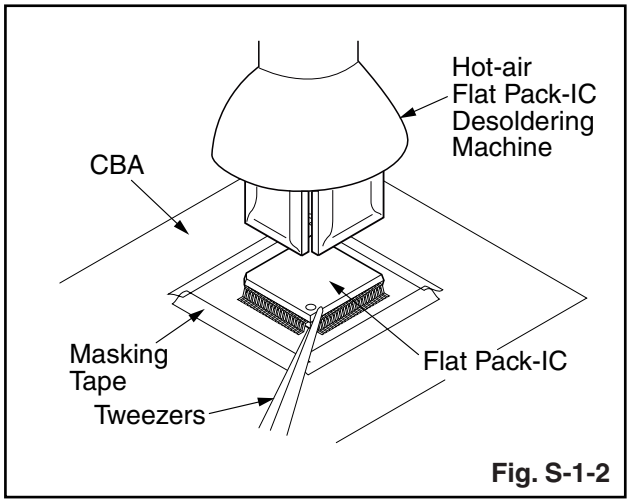


Fig. S-1-2

With Soldering Iron:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

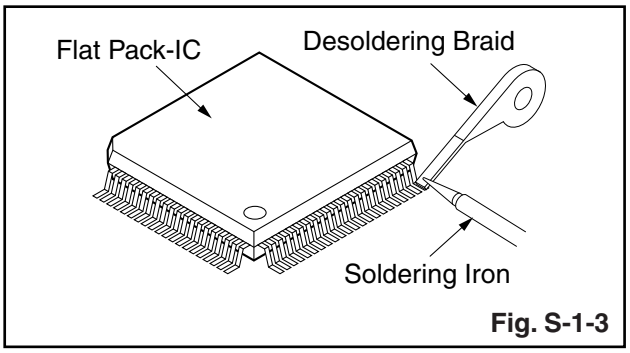


Fig. S-1-3

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

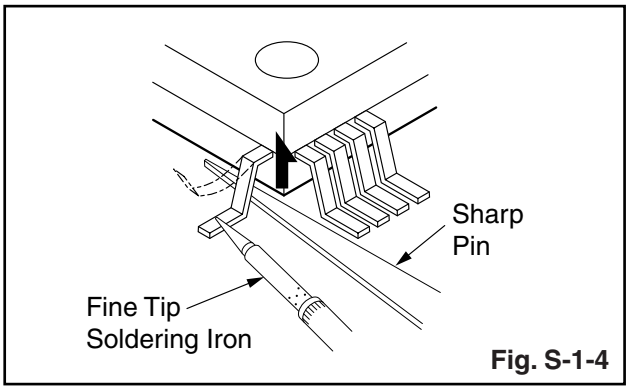


Fig. S-1-4

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note: When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

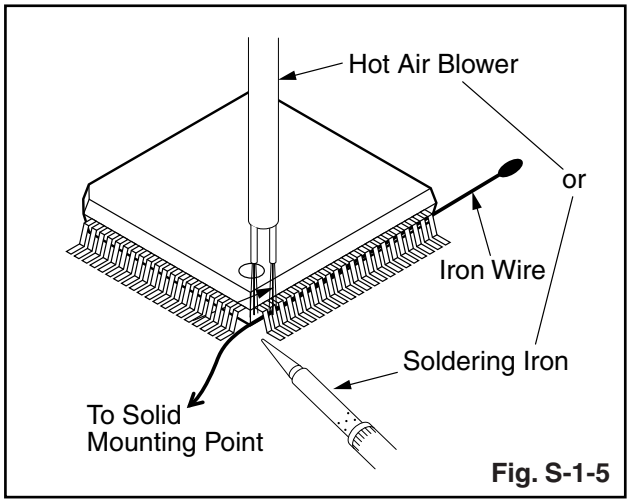


Fig. S-1-5

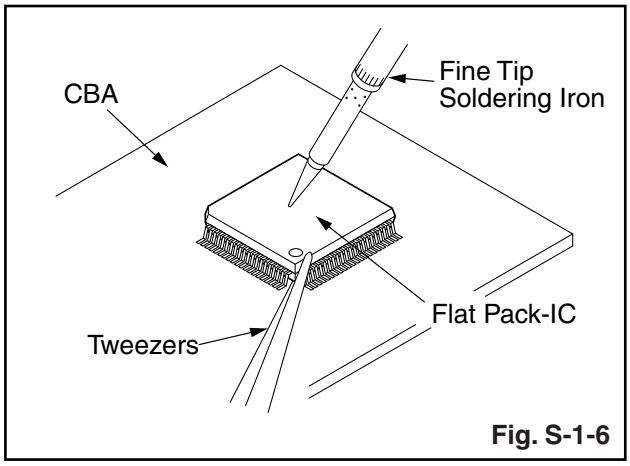


Fig. S-1-6

2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

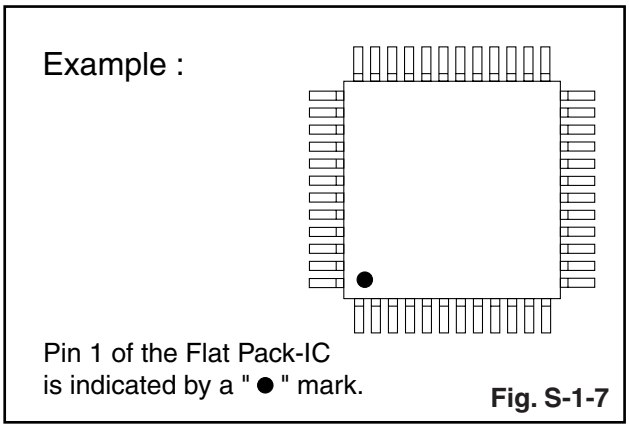


Fig. S-1-7

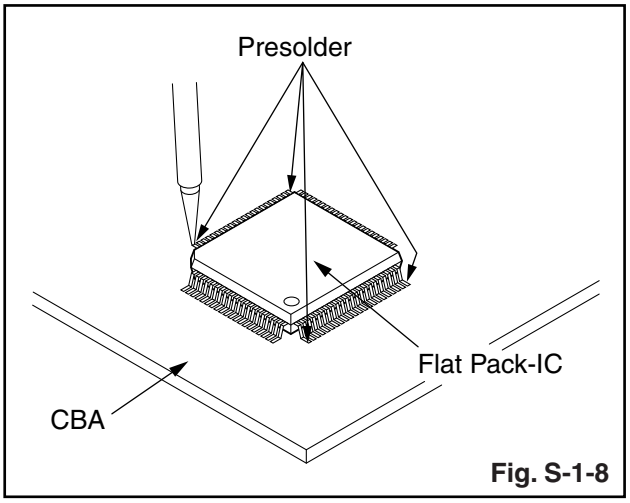


Fig. S-1-8

Instructions for Handling Semi-conductors

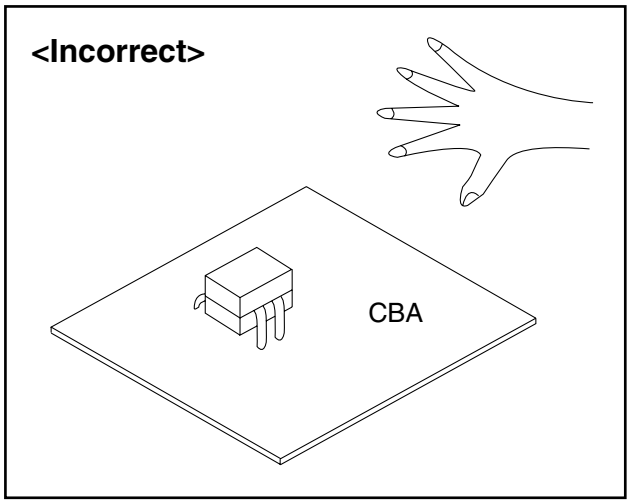
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

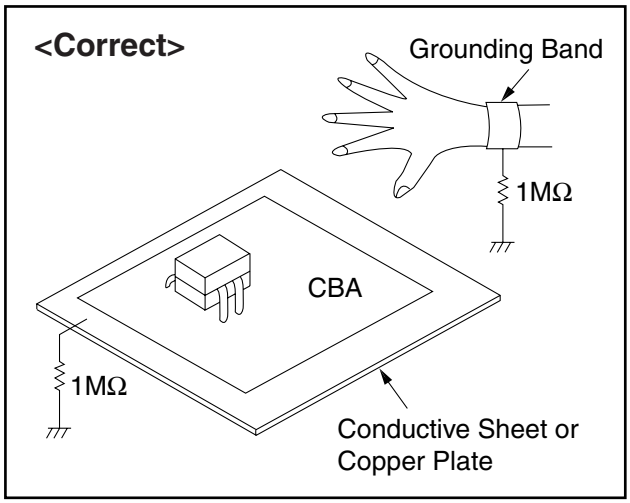
1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

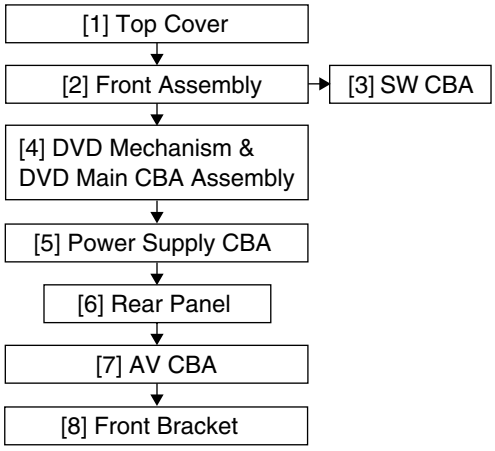




CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ Loc. No.	Part	Removal		
		Fig. No.	Remove/*Unhook/ Unlock/Release/ Unplug/Desolder	Note
[1]	Top Cover	D1	6(S-1)	---
[2]	Front Assembly	D2	*5(L-1), *CN1061, *3(L-2), Shield A	1
[3]	SW CBA	D2	*2(L-3)	---
[4]	DVD Mechanism & DVD Main CBA Assembly	D3	4(S-3a), (S-3b), *CN101, *CN701, Locking Card Spacers, M-PCB Plate Earth	---
[5]	Power Supply CBA	D4	4(S-4), *CN1060	---
[6]	Rear Panel	D5	6(S-5), (S-6), (S-7)	---
[7]	AV CBA	D5	5(S-8), Heat Sink Plate	---
[8]	Front Bracket	D5	(S-9)	---
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)

Note:

(1) Identification (location) No. of parts in the figures

(2) Name of the part

(3) Figure Number for reference

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P = Spring, L = Locking Tab, S = Screw,
CN = Connector
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

(5) Refer to “Reference Notes.”

Reference Notes

1. **CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.

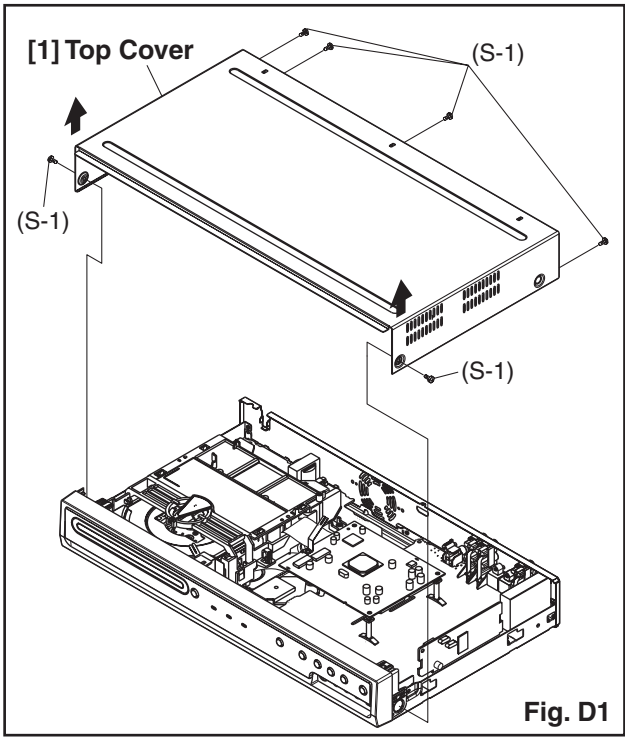


Fig. D1

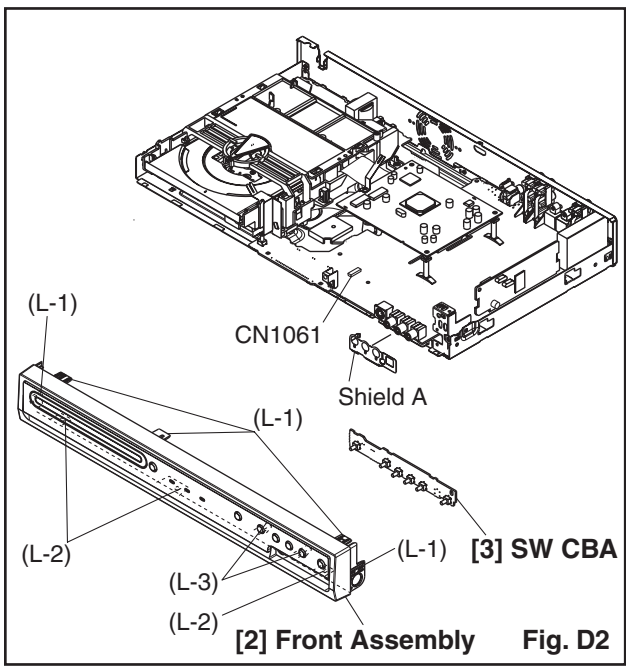


Fig. D2

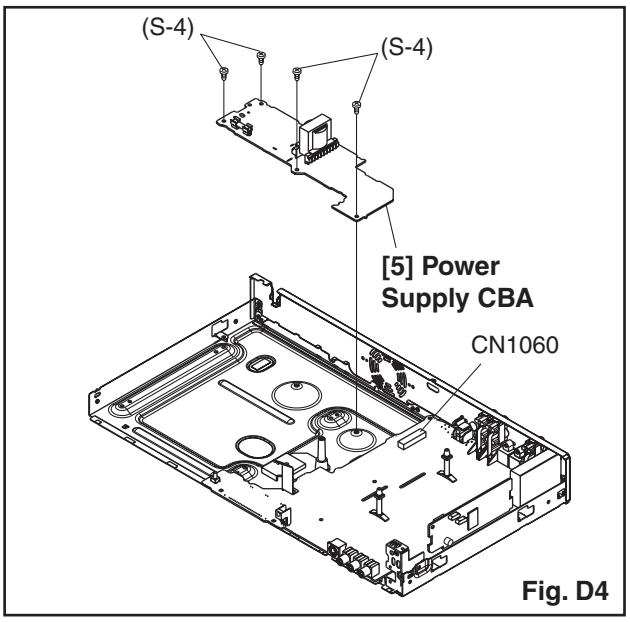


Fig. D4

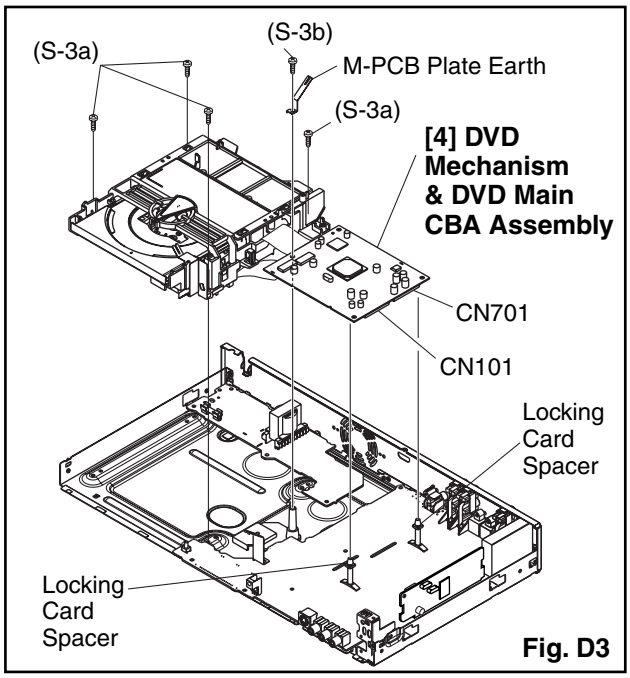


Fig. D3

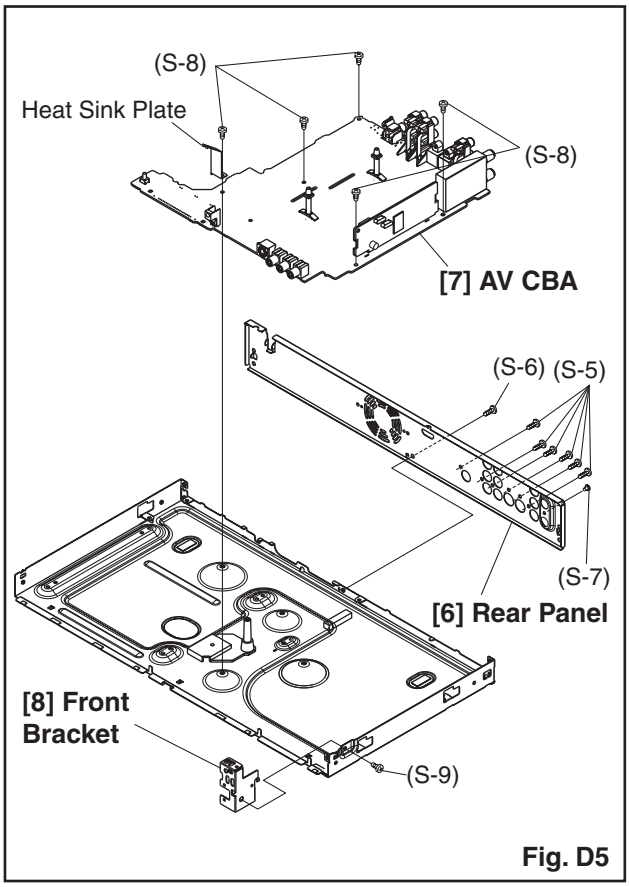
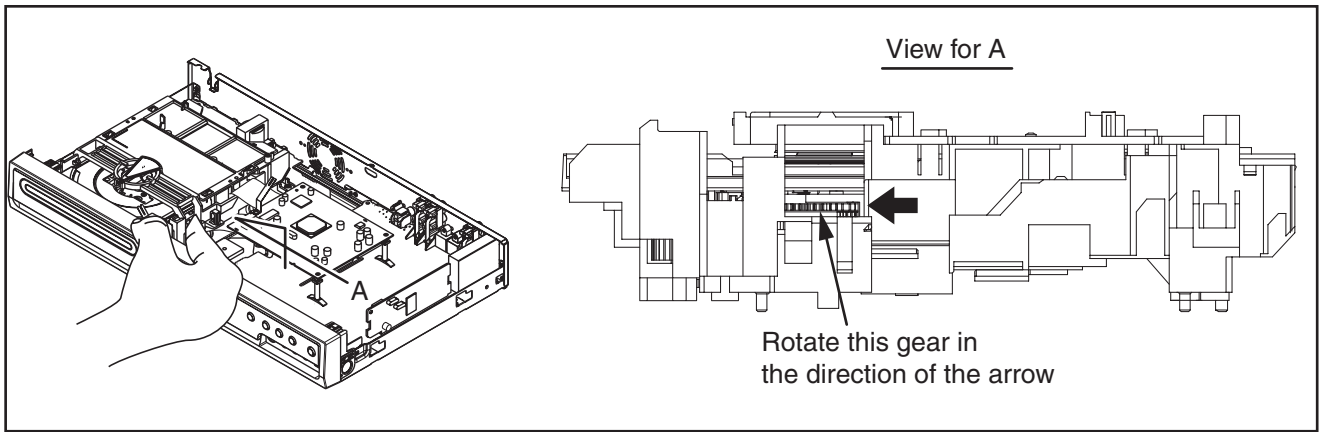


Fig. D5

3. How to Eject Manually

Note: When rotating the gear, be careful not to damage the gear.

1. Remove the Top Cover.
2. Rotate the gear in the direction of the arrow manually as shown below until the tray descends.
3. Pull the tray out manually and remove a disc.



HOW TO INITIALIZE THE DVD RECORDER

To put the program back at the factory-default, initialize the DVD recorder as the following procedure.

1. Turn the DVD recorder on.
2. Confirm that no disc is loaded or that the disc tray is open. To put the DVD recorder into the Version display mode, press [CM SKIP], [1], [2], and [3] buttons on the remote control in the order. Fig. a appears on the screen.

*1: "*******" differs depending on the models.
*2: Firmware Version differs depending on the models, and this indication is one example.

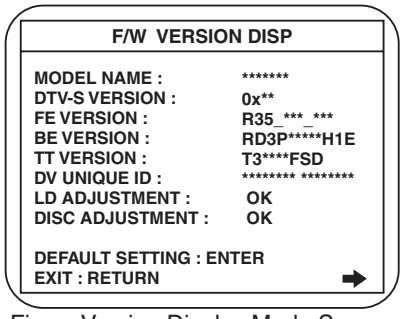


Fig. a Version Display Mode Screen

3. Press [OK] button, then the DVD recorder starts initializing. When the initializing is completed, the DVD recorder exits the Version display mode and turns off the power automatically.
   * To move into the Normal mode from the Version display mode, press [RETURN] button on the remote control instead of [OK] button.
   * When [STANDBY-ON] button is pressed before [OK] button is pressed, the DVD recorder exits the Version display mode, then the power turns off.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD recorder into version up mode, press [CM SKIP], [6], [5], and [4] buttons on the remote control unit in the order. Then the tray will open automatically.
   Fig. a appears on the screen.

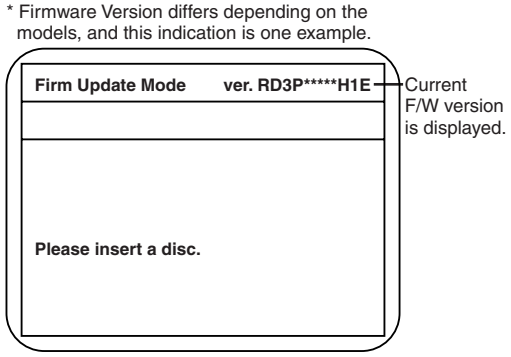


Fig. a Version Up Mode Screen

3. Load the disc for version up.
   Fig. c appears on the screen. The file on the top is highlighted as the default.
   When there is only one file to exist, Step 4 will start automatically.

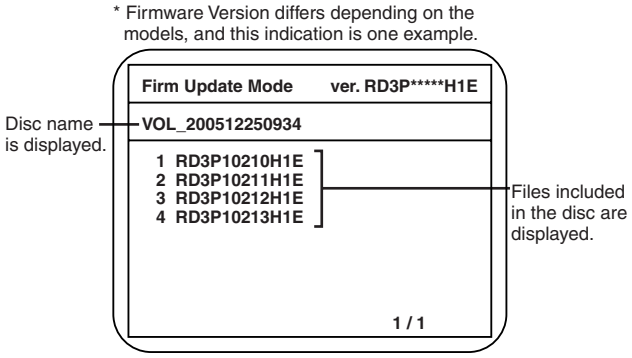


Fig. c Update Disc Screen

4. Select the firmware version pressing arrow buttons, then press [OK].
   Fig. d appears on the screen. The DVD recorder starts updating.

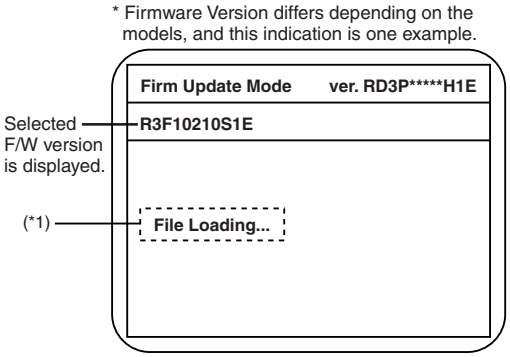


Fig. d Programming Mode Screen

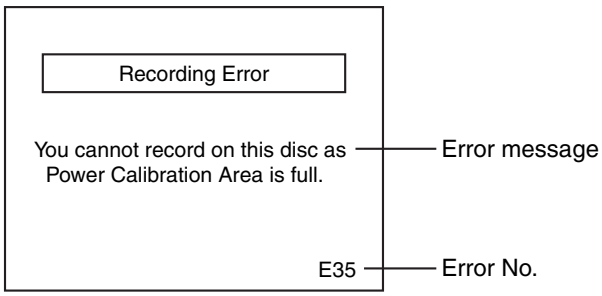
The appearance shown in (*1) of Fig. d is described as follows.

No.	Appearance	State
1	File Loading...	Sending files into the memory
2	Firmware Updating... XX% Complete.	Writing new version data
---	Firmware Update Failure	Failed in updating

5. After updating is finished, the tray opens automatically.
   At this time, no button is available.
6. Pull out the AC code once, then insert it again.

FUNCTION INDICATOR SYMBOLS

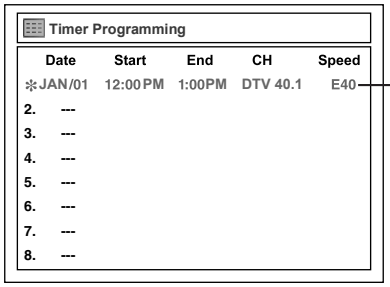
Note: If an error occurs, a message with the error number appears on the screen.



Message	Solution	Error No.	Error Description	Priority
Can not record on this disc.	Insert the recordable disc, and ensure the disc status satisfies the recording requirements.	1	An error occurs during data reading.	-
		2	There is no reply for 15 seconds in Test Unit Ready.	-
		3	Cannot write the data after trying three times.	-
		4	An error occurs with OPC.	-
		5	During recovery in a record.	-
		6	An error occurs even if recovery has been tried three times.	-
		7	An error occurs in a format.	-
		8	It cannot start an encode.	-
		9	NV_PCK/RDI_PCK is not in encoded data.	-
		10	Encode Pause condition continued for 10 minutes.	-
		11	Encode Pause condition continued in normal REC condition for 10 minutes.	-
		12	Difference in the address and can not get StreamID of RDI/VIDEO.	-
		13	It is a reply that “ATAPI is not readable.”	-
		14	Cannot write the data after recovering SMALL VMGI.	-
		15	Cannot write the data after DVD-R Reverse Track.	-
		16	An error occurs in Finalize Close.	-
		17	An error occurs in Rec Stop Close.	-
		18	An error occurs in PCA Full (DVD_R).	-
		19	Safety Stop occurs during editing.	-
		20	High Speed Disc.	2
		21	The disc is not formatted.	5
		22	Disc Error has occurred.	3
		24	The disc except DVD-R/RW or finalized DVD-R.	1
This program is not allowed to be recorded.	You cannot record copy prohibited programs.	25	During the Macrovision picture input.	11
		26	During the CGMS picture input.	12
This disc is protected and not recordable.	Release the disc protect setting in the Disc Setting menu.	29	Disc Protected Disc.	6

Message	Solution	Error No.	Error Description	Priority
Disc is full. (No area for new recording)	Insert the recordable disc with enough recording space.	30	No avilable recording space.	10
You cannot record on the disc as Power Calibration Area is full.	Insert a new disc.	35	PCA is Full. (in REC start)	4
This disc is already finalized.	Release the finalizing for this disc.	36	It is finalized. (Video Format Disc)	8
Can not record on this disc.	Repeat the same operation.	37	Access to Memory Area range outside.	-
		38	Sector Address is wrong.	-
		39	BUP writing error of chapter editing.	-
You cannot record more than 49 titles on the disc.(The maximum is 49.)	Delete unnecessary titles.	43	Its recording capacity has been reached.	9
You cannot record more than 254 chapters on the disc.(The maximum is 254.)	Delete unnecessary chapter marks.	44	The 254 chapter has been reached.	10
This program is not recordable in +VR mode.	You cannot record copy prohibited programs.	45	During the CGMS picture input.	12
The disc has a different menu layout. (Set “Replace Disc Menu” to “ON” to rewrite the menu,after that you will record to.	Set “Replace Disc Menu” to “ON” to rewrite the menu,after that you will record to.	46	Trying to record onto the +VR formatting disc that had been recorded by the other recorder.	7

If an error occurs during the timer recording, one of the following error numbers (40 to 42) or the above error messages (error number: 1 to 39) is displayed on the recording menu after timer recording.
(Once the screen of the program line is exited, the program line for the error will be cleared.)
(No Error Message is displayed for the error No. 40 ~ 42.)

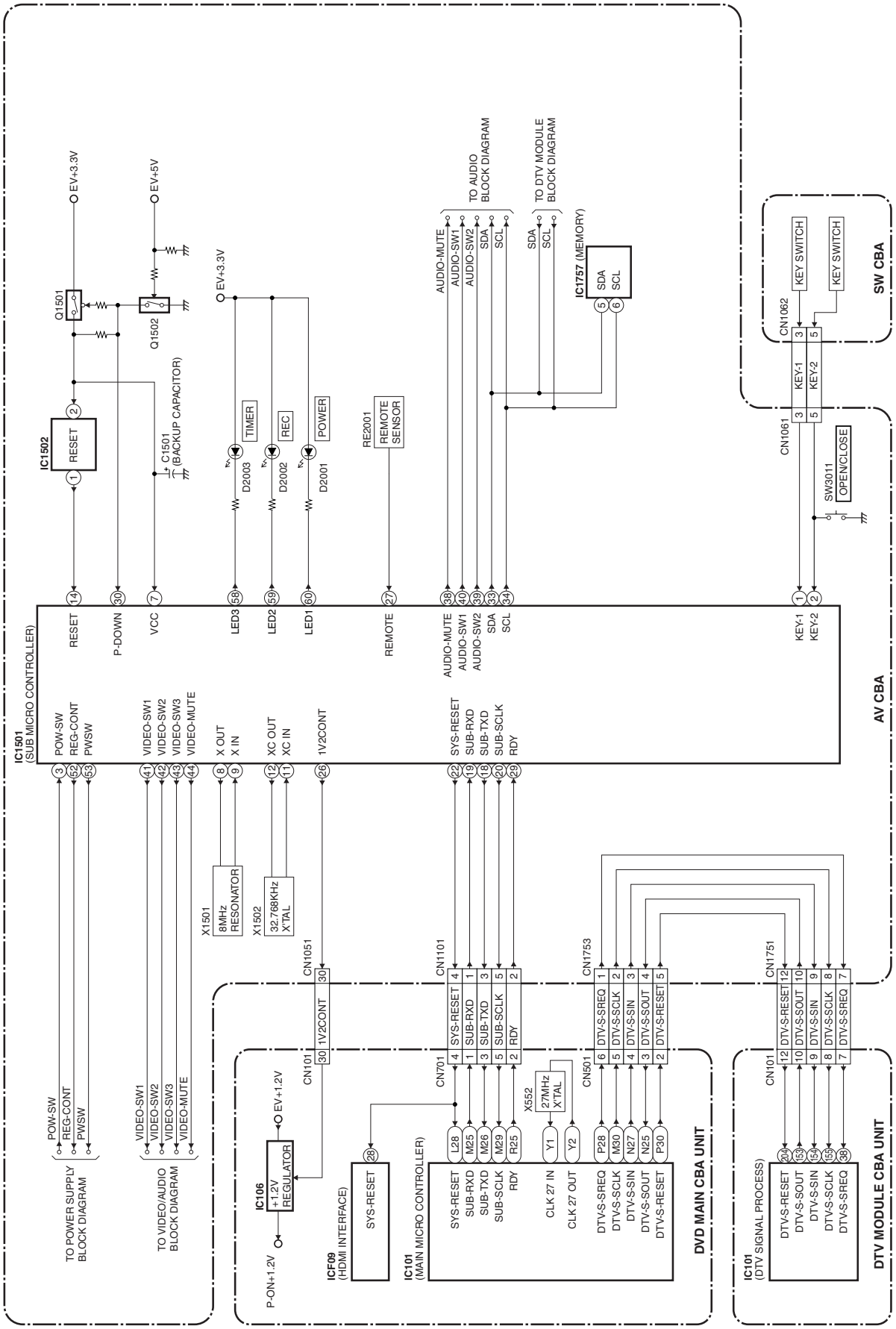


A program with the error number is grayed out and asterisked on the timer programming list.

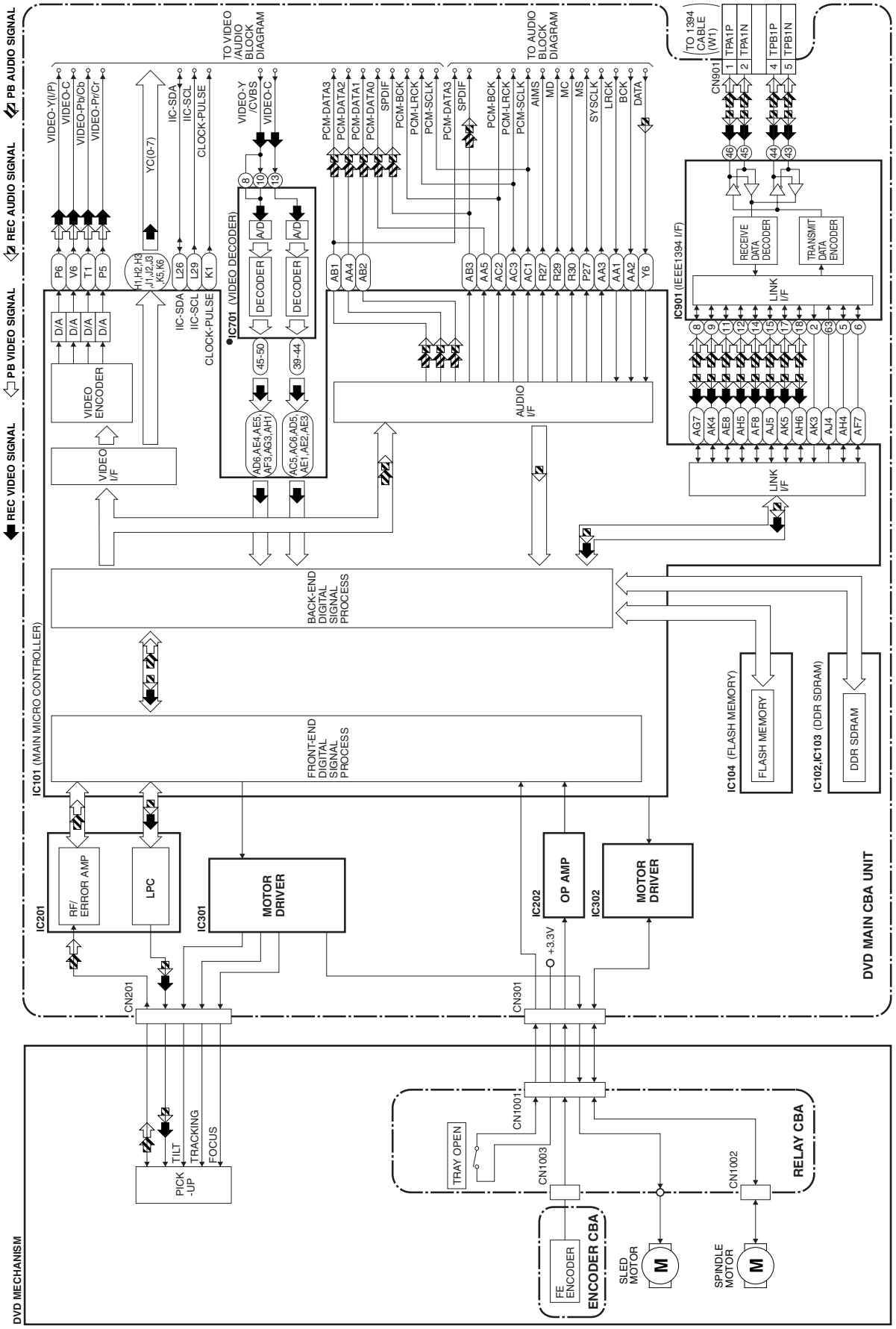
Message	Solution	Error No.	Error Description	Priority
Error message is not displayed.	- Set the timer programming correctly. - Set the timer programming before the start time.	40	- Some portion has not been recorded because of program overlapping. - Recording did not start at the start time.	-
	Turn the power on and set the clock correctly then set timer programming again.	41	Power failed	-
	Insert the recordable disc.	42	No disc when recording	-

BLOCK DIAGRAMS

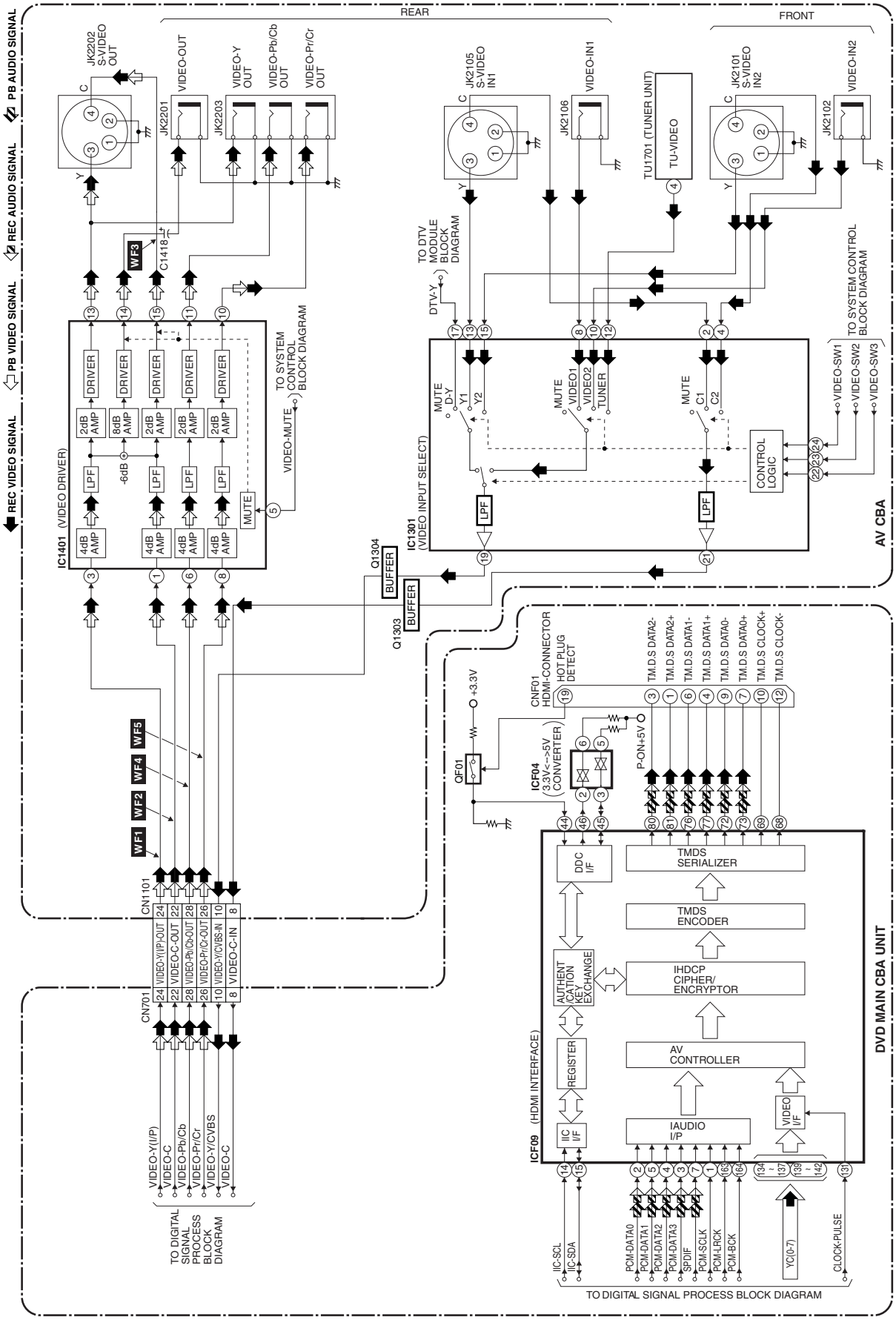
System Control Block Diagram



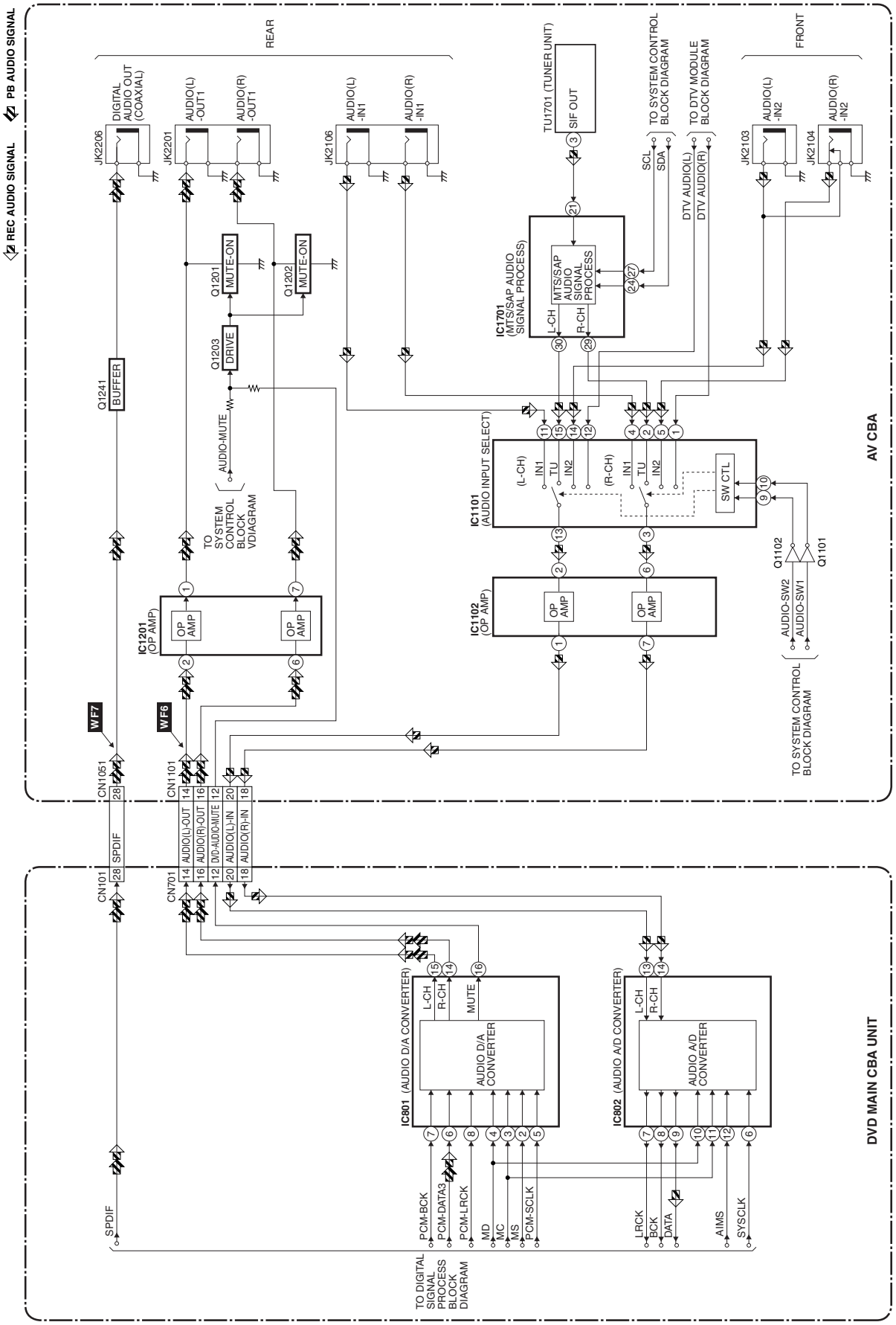
Digital Signal Process Block Diagram



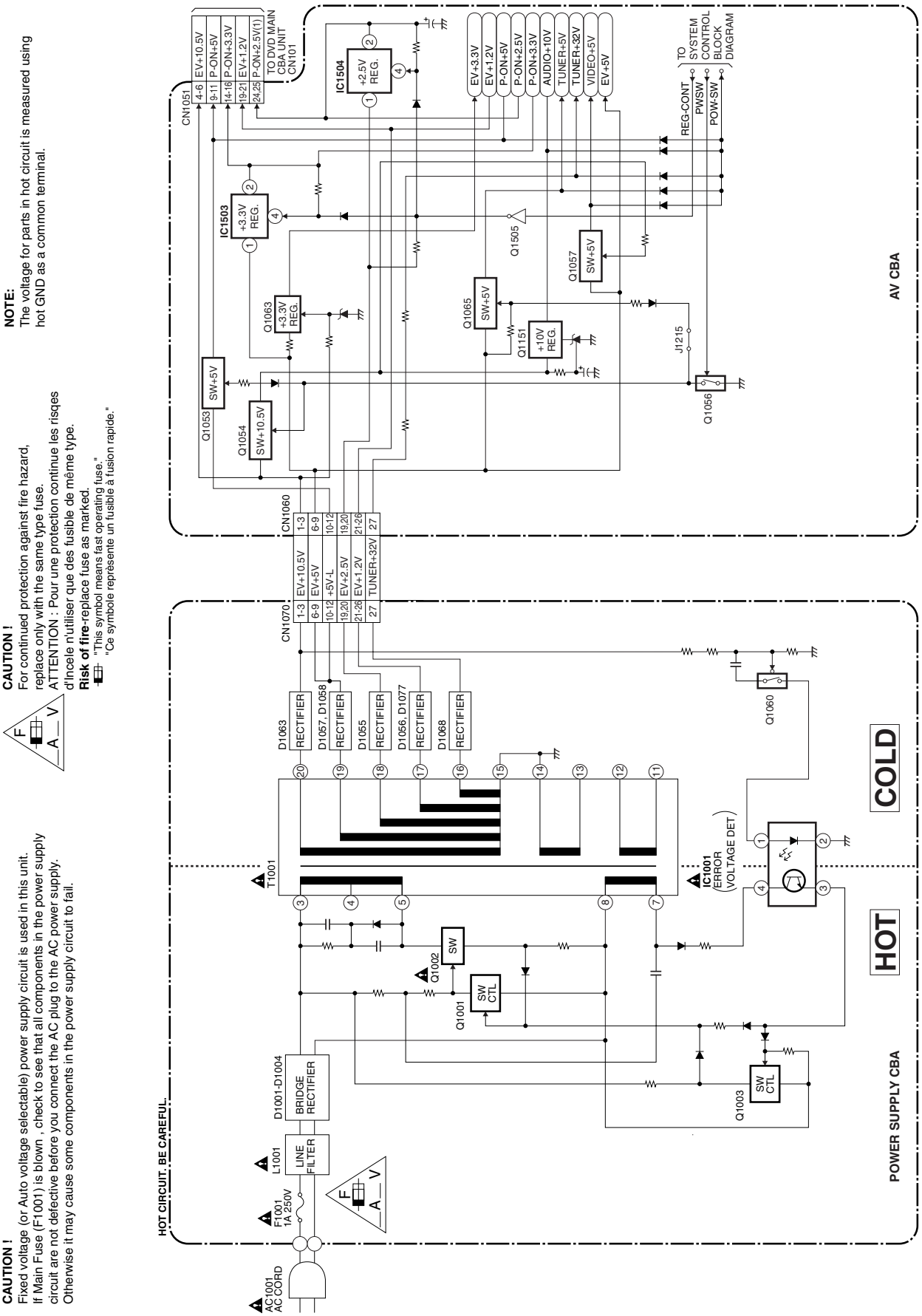
Video Block Diagram



Audio Block Diagram



Power Supply Block Diagram

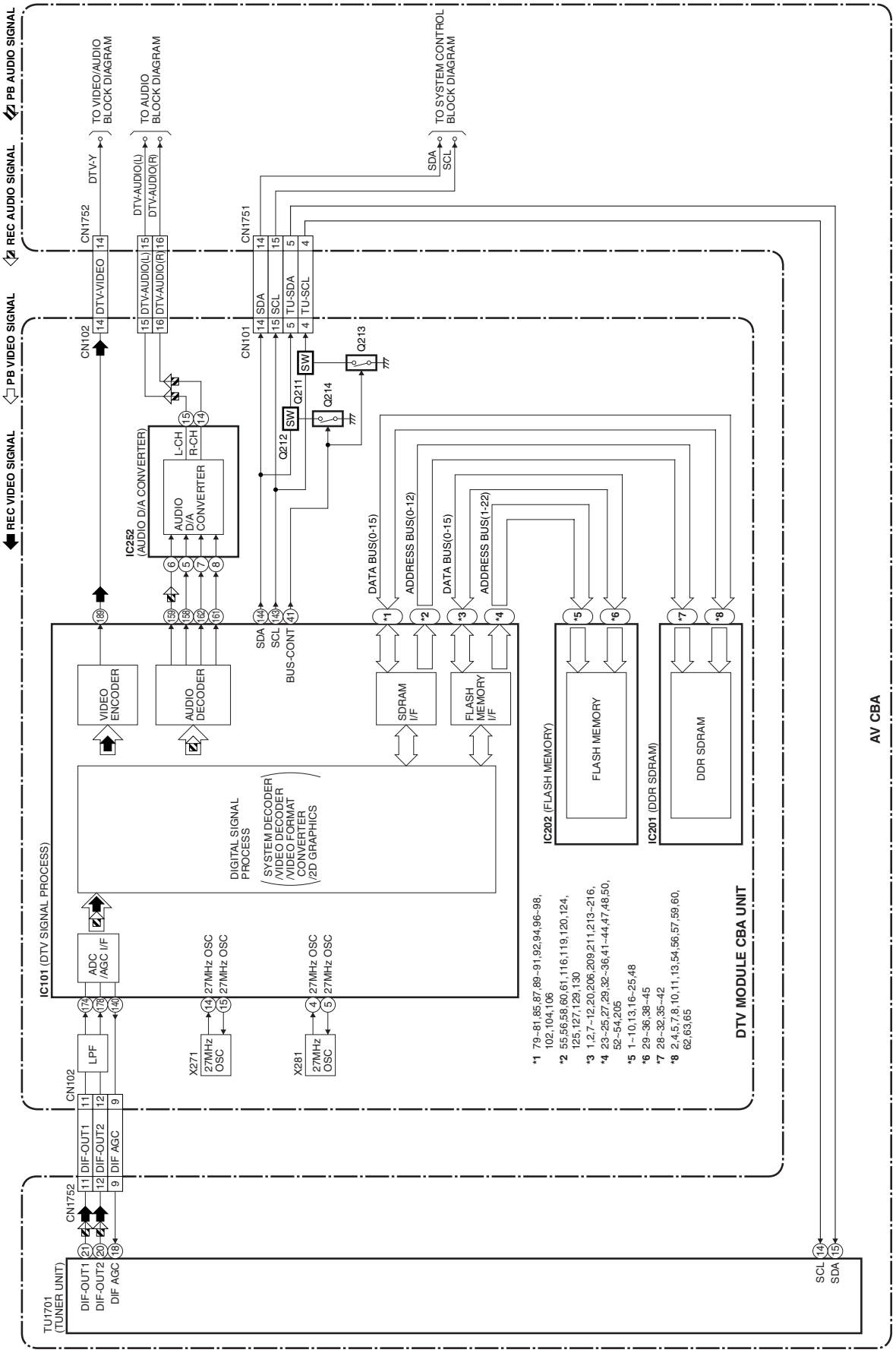


CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

DTV Module Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

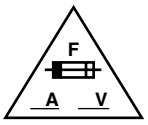
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

This symbol means fast operating fuse.
Ce symbole reprèsente un fusible à fusion rapide.

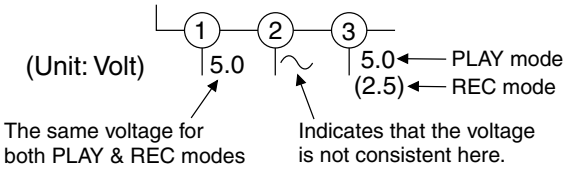
2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

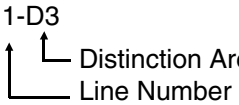
3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

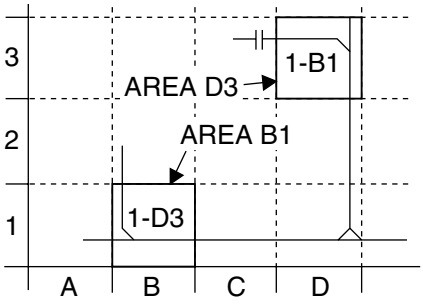
4. Voltage indications for PLAY and REC mode on the schematics are as shown below:



5. How to read converged lines



Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".



6. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

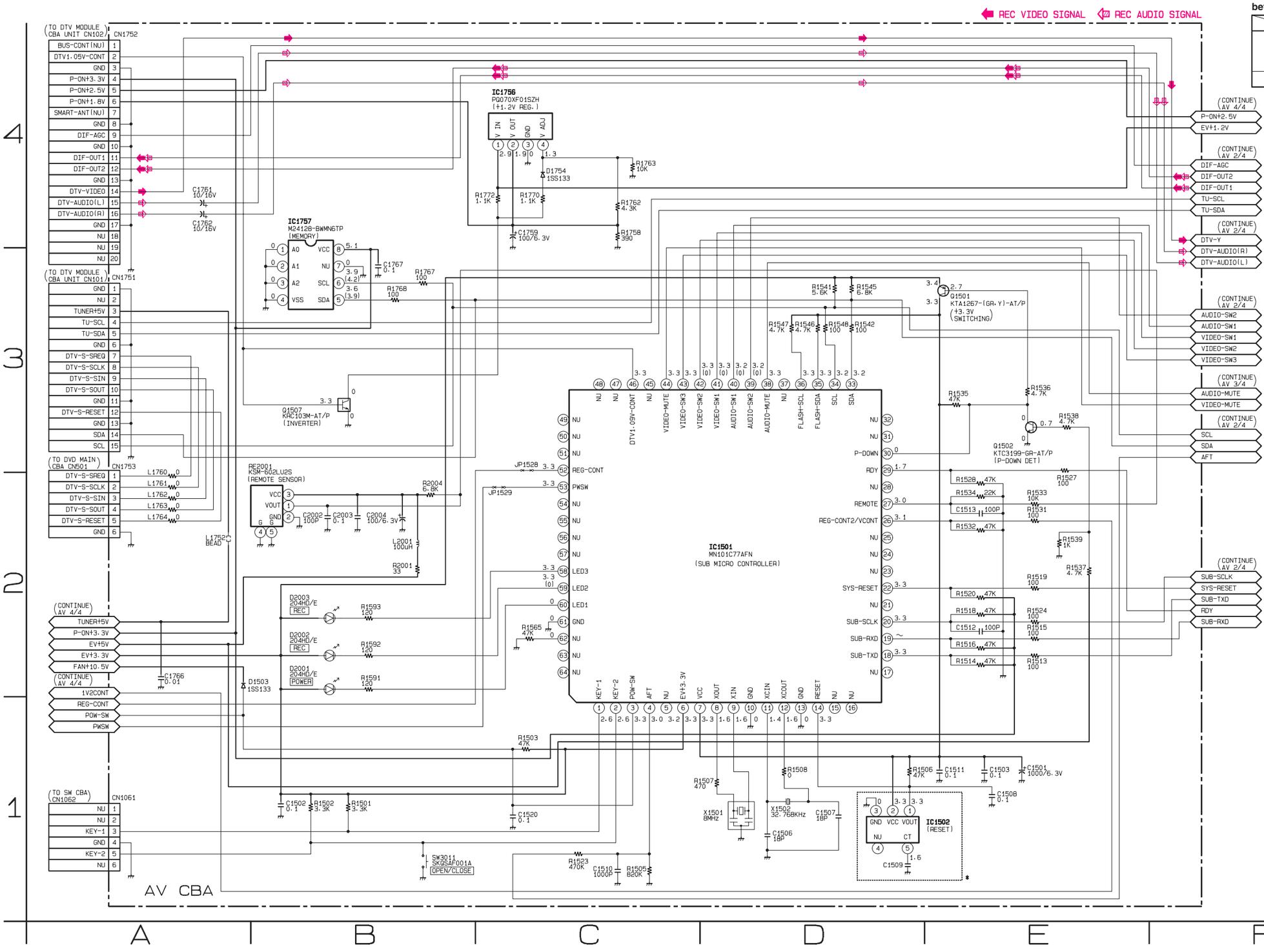
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

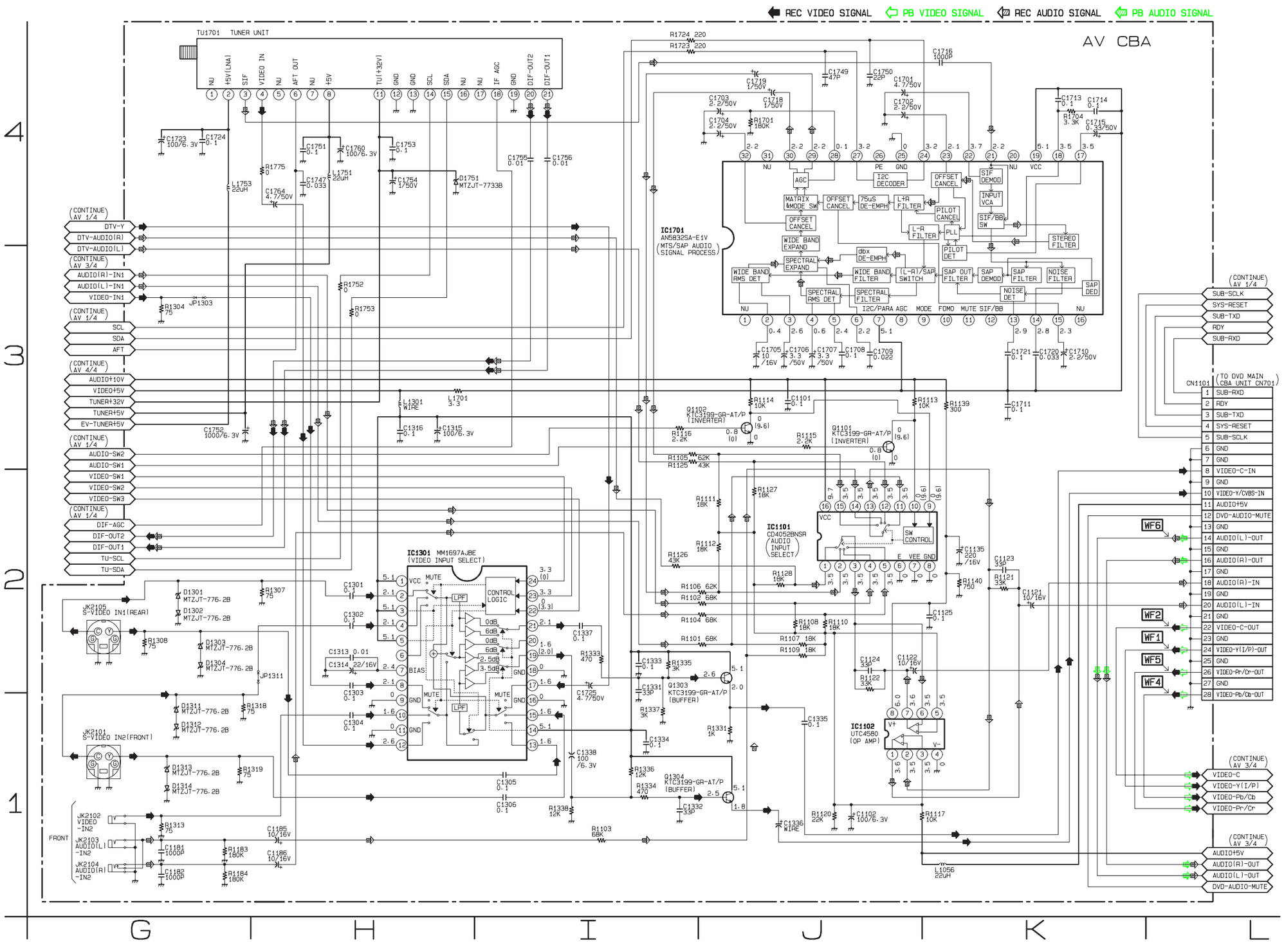
AV 1/4 Schematic Diagram

*** NOTE**
These components (IC1502, C1509) can be used in any models. However, you cannot mix components under Group A with the ones under Group B. You can choose either Group. The difference between Group A and Group B is shown below.

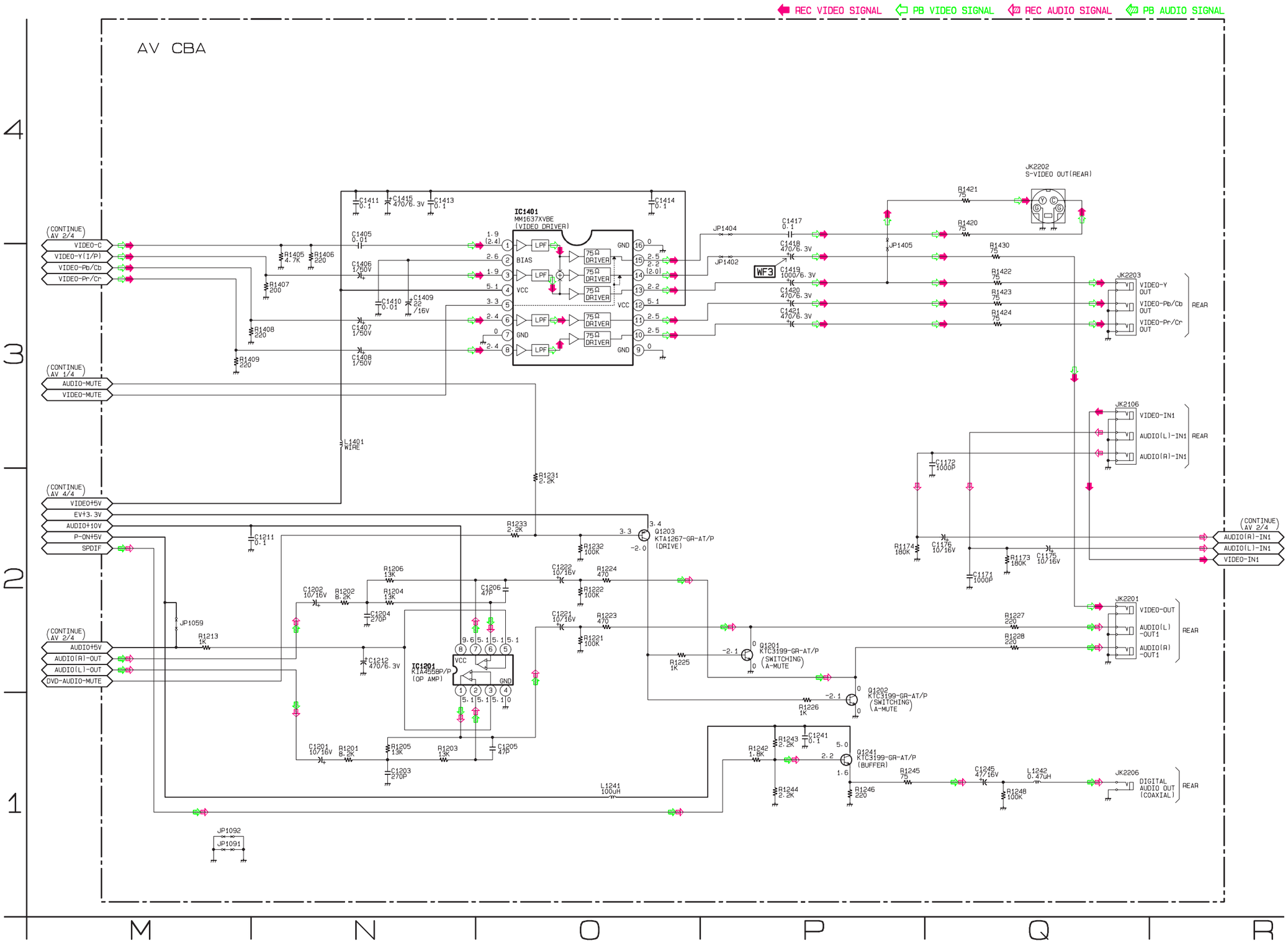
	Group A	Group B
IC1502	R3112N191A-TR-FA /R3112N191A-TR-FB /BU4219G-TR	PST3619NR
C1509	0.015	0.1



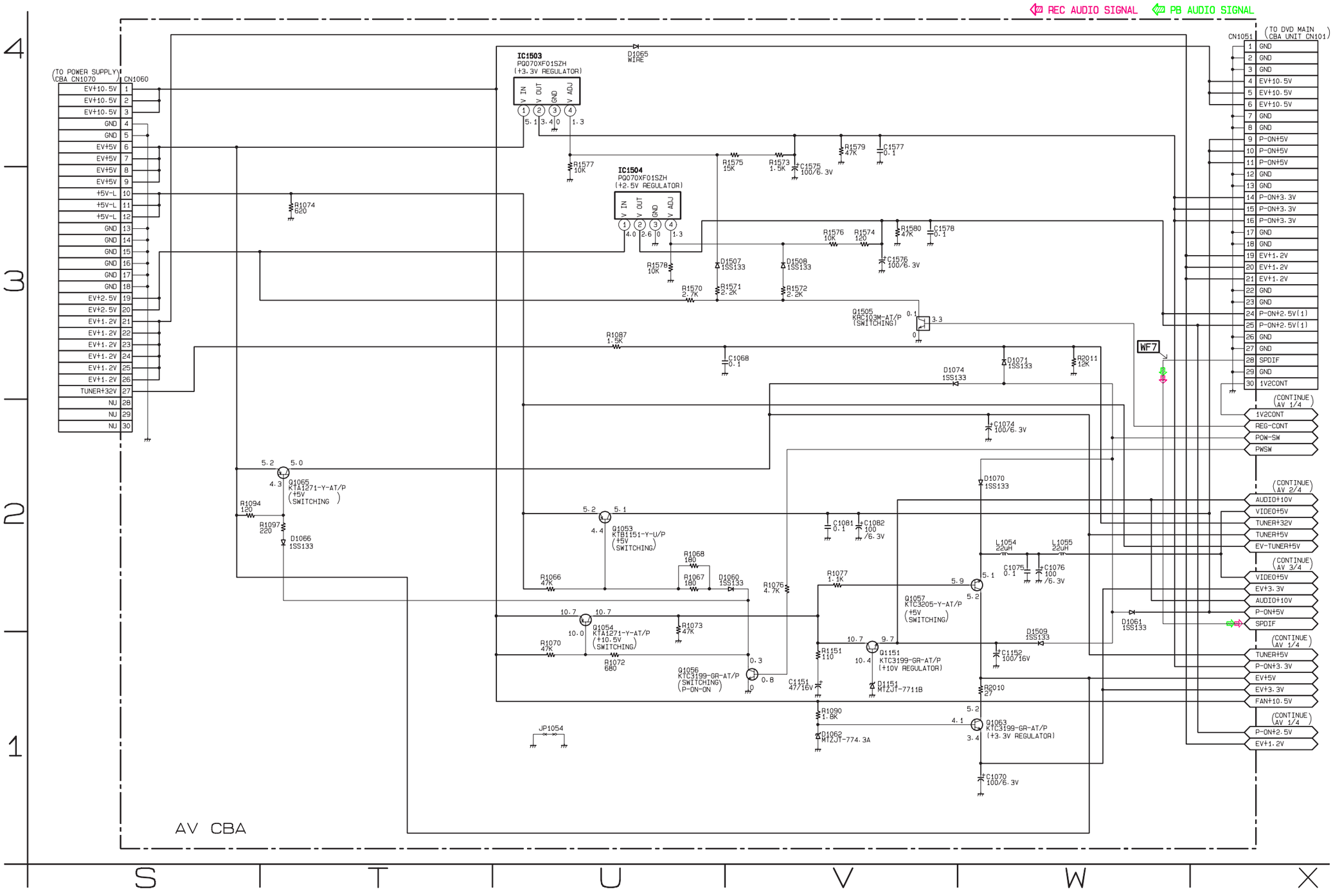
AV 2/4 Schematic Diagram



AV 3/4 Schematic Diagram



AV 4/4 Schematic Diagram

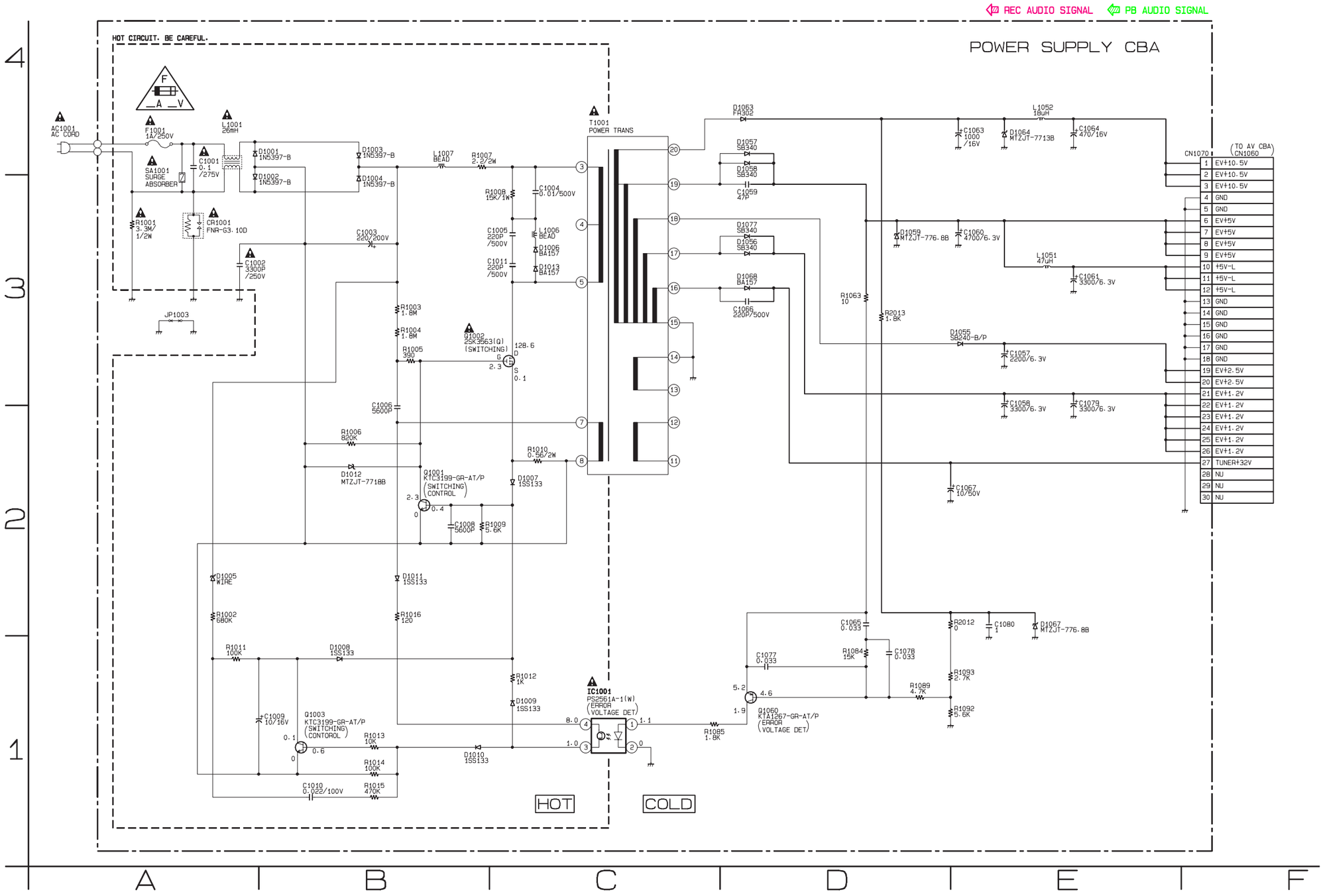


Power Supply Schematic Diagram

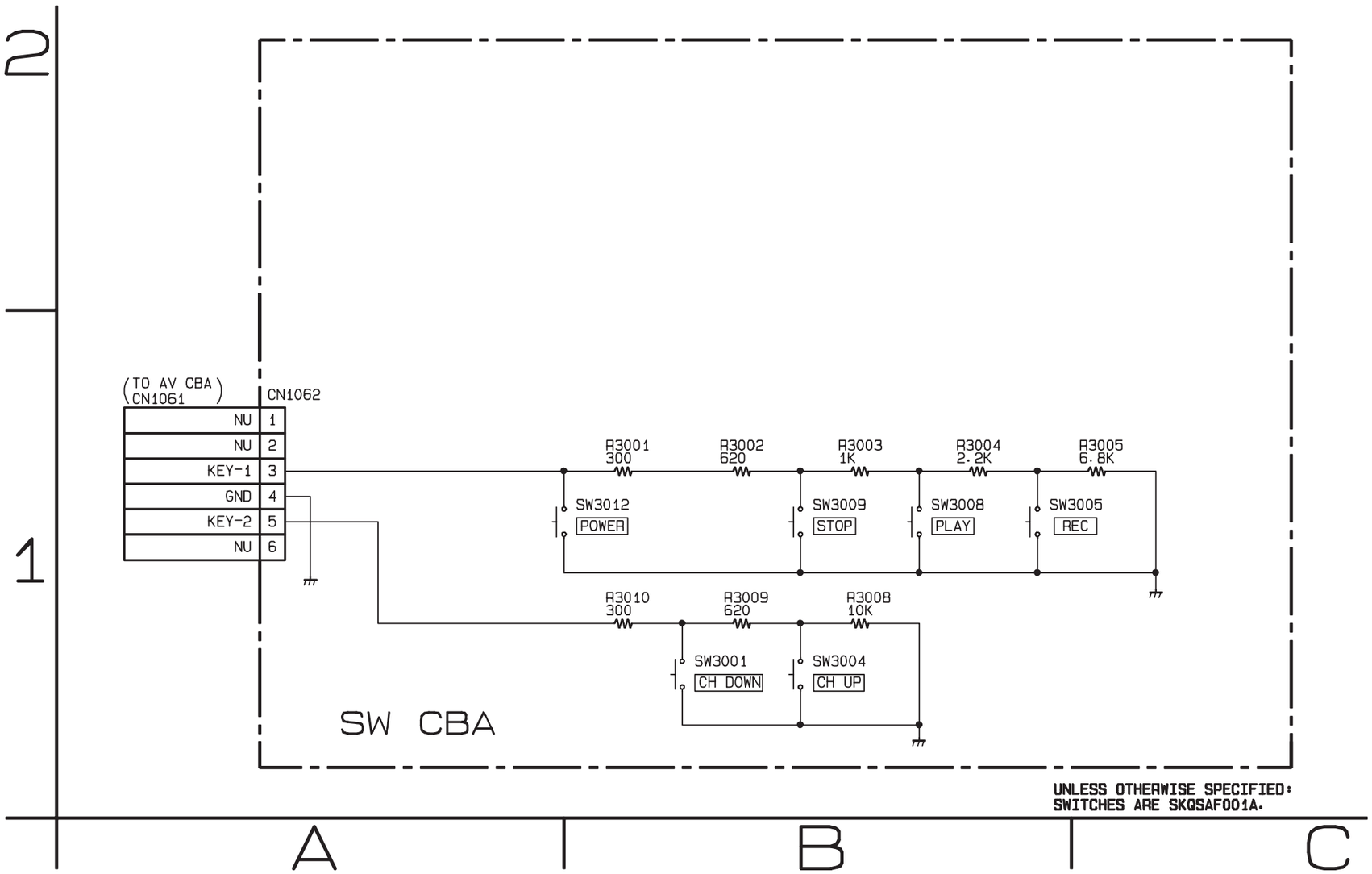
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

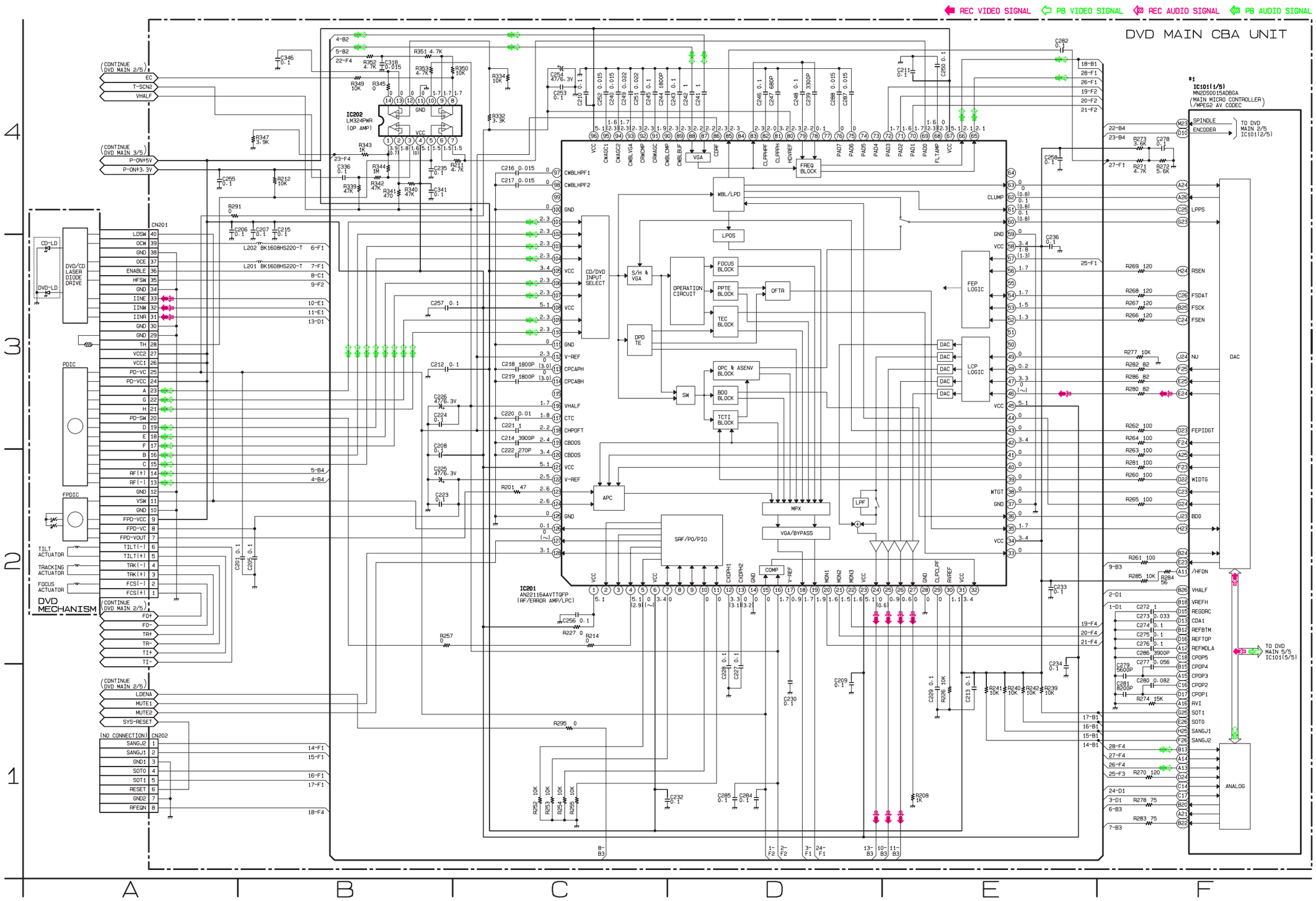


SW Schematic Diagram



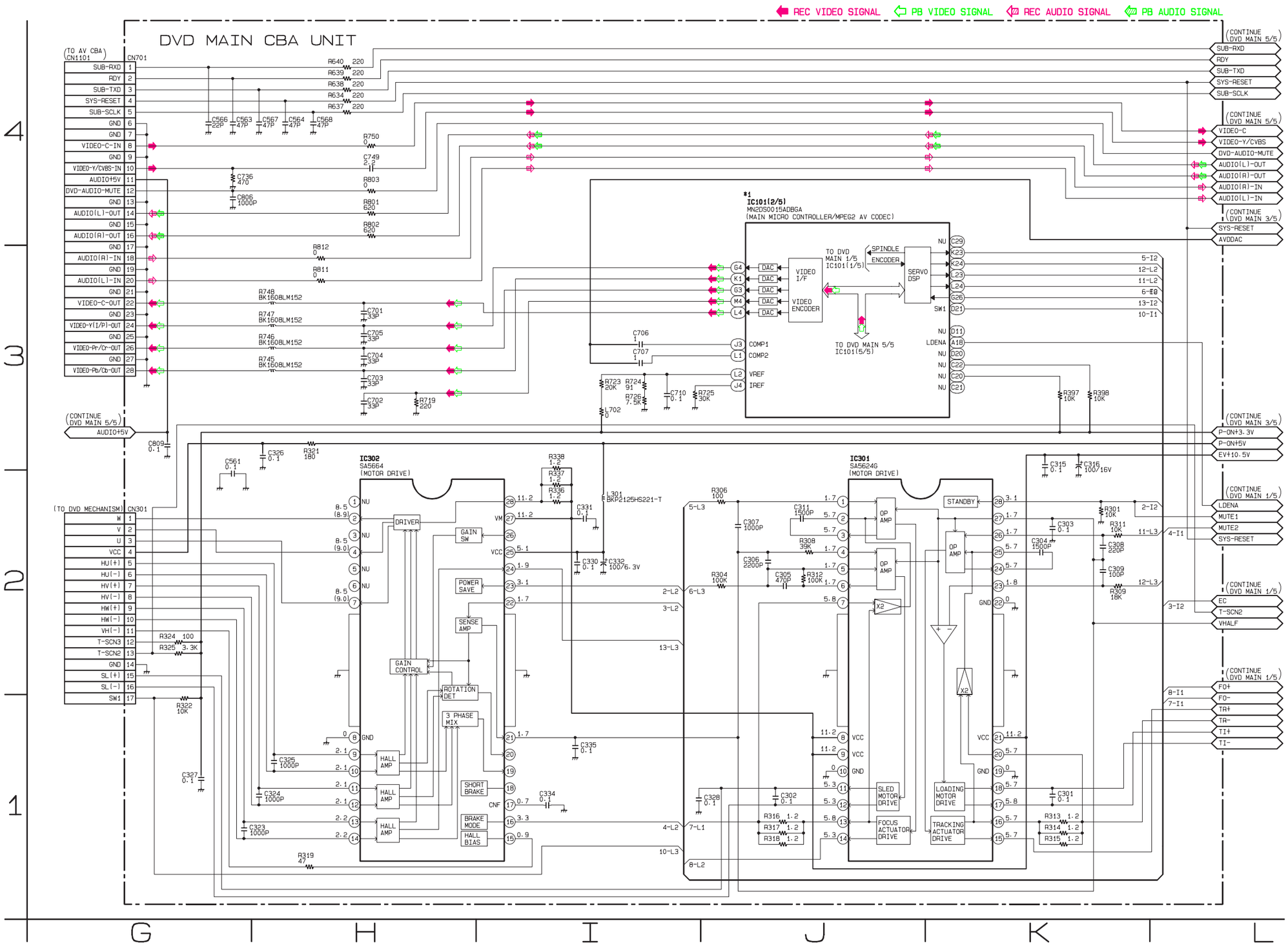
DVD Main 1/5 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



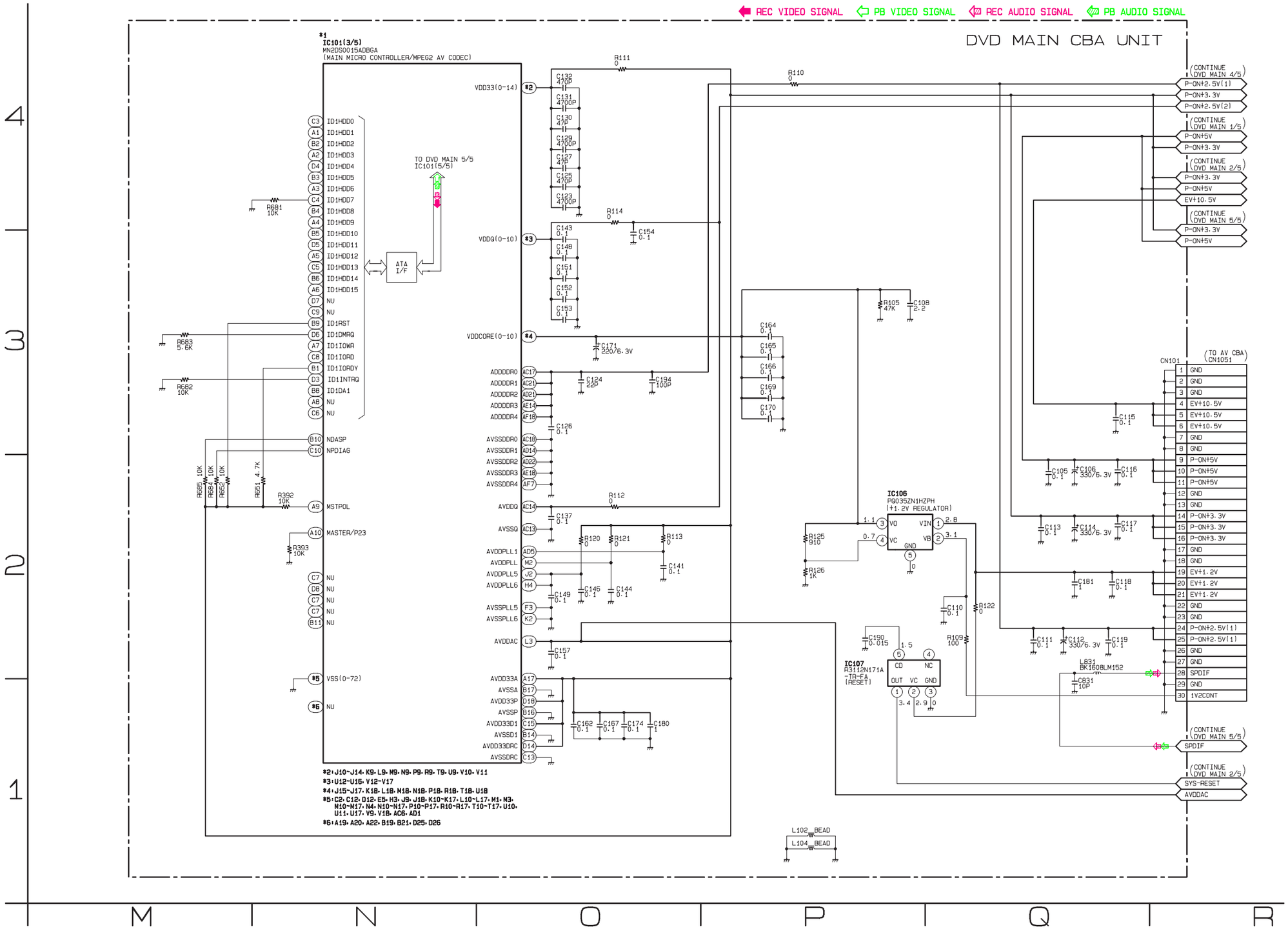
DVD Main 2/5 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



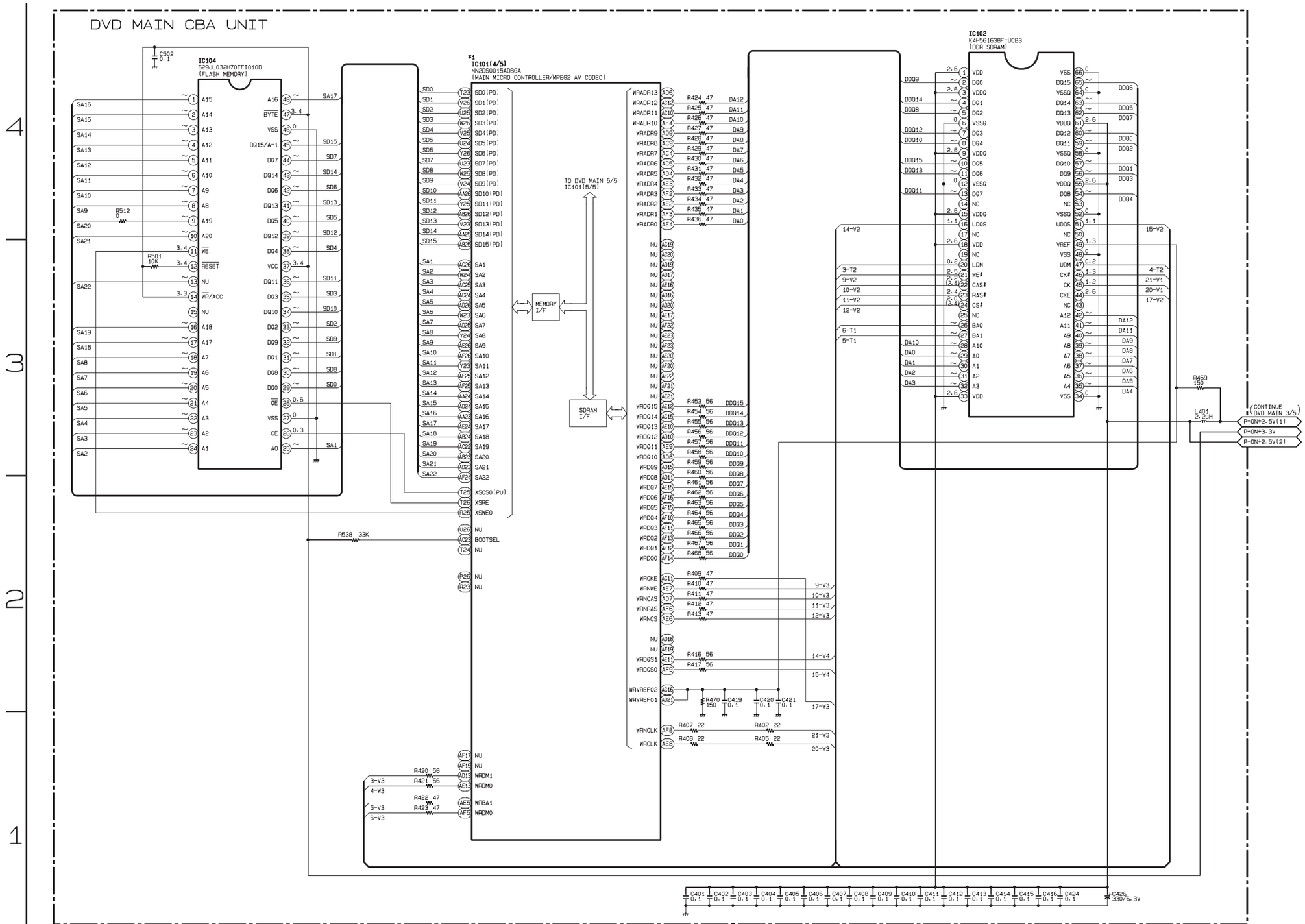
DVD Main 3/5 Schematic Diagram

∗1 NOTE:
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



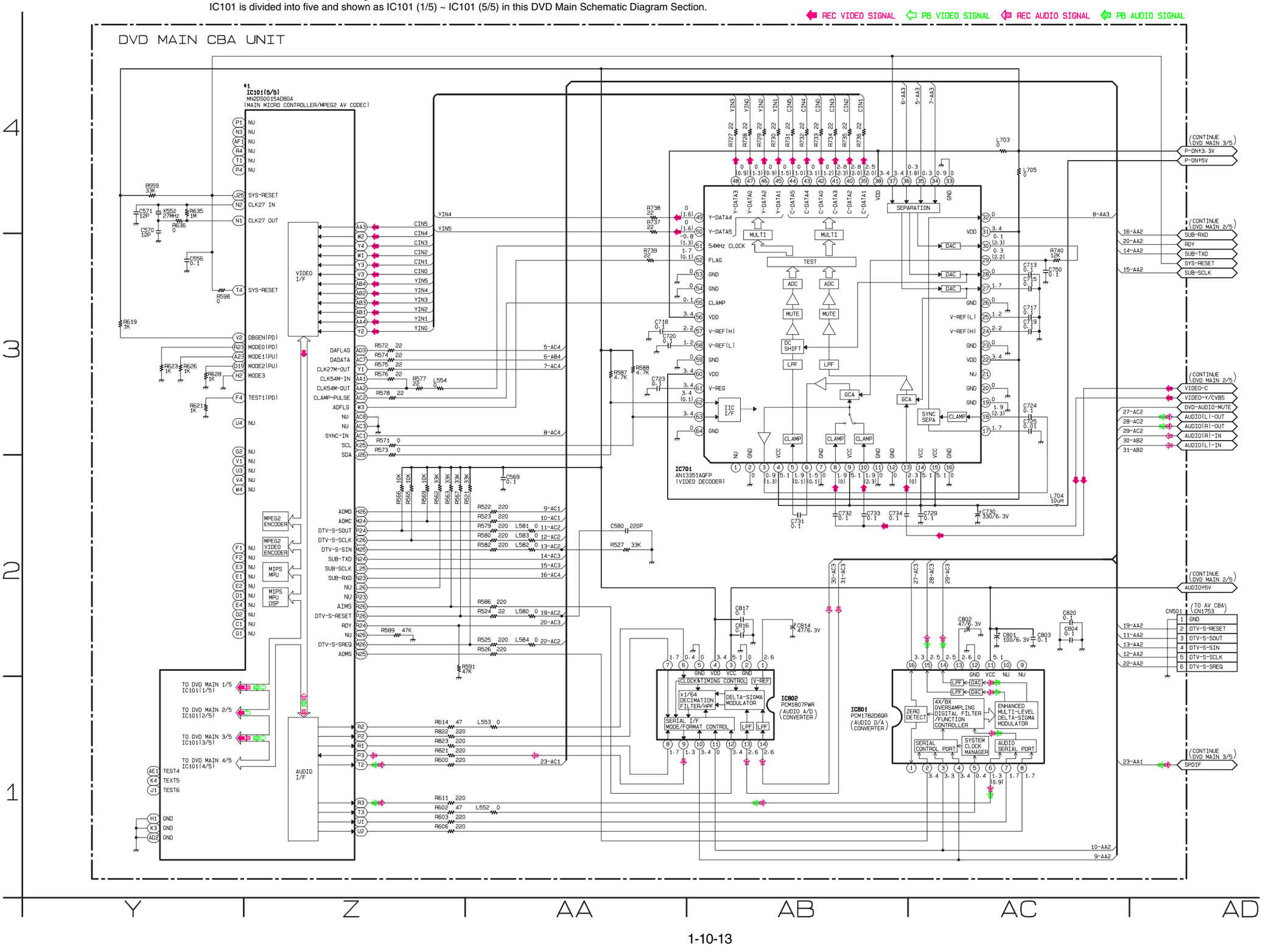
DVD Main 4/5 Schematic Diagram

∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.

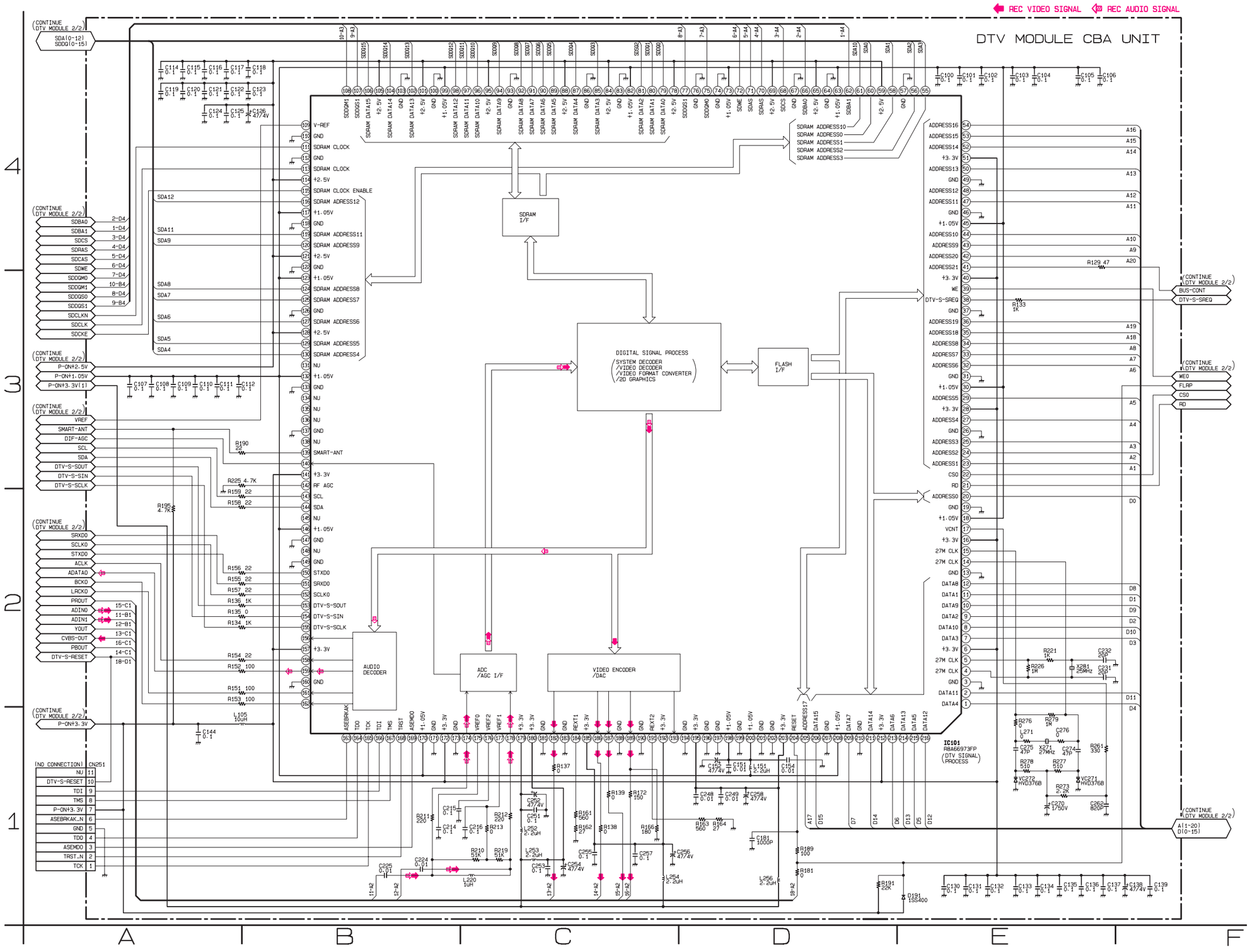


DVD Main 5/5 Schematic Diagram

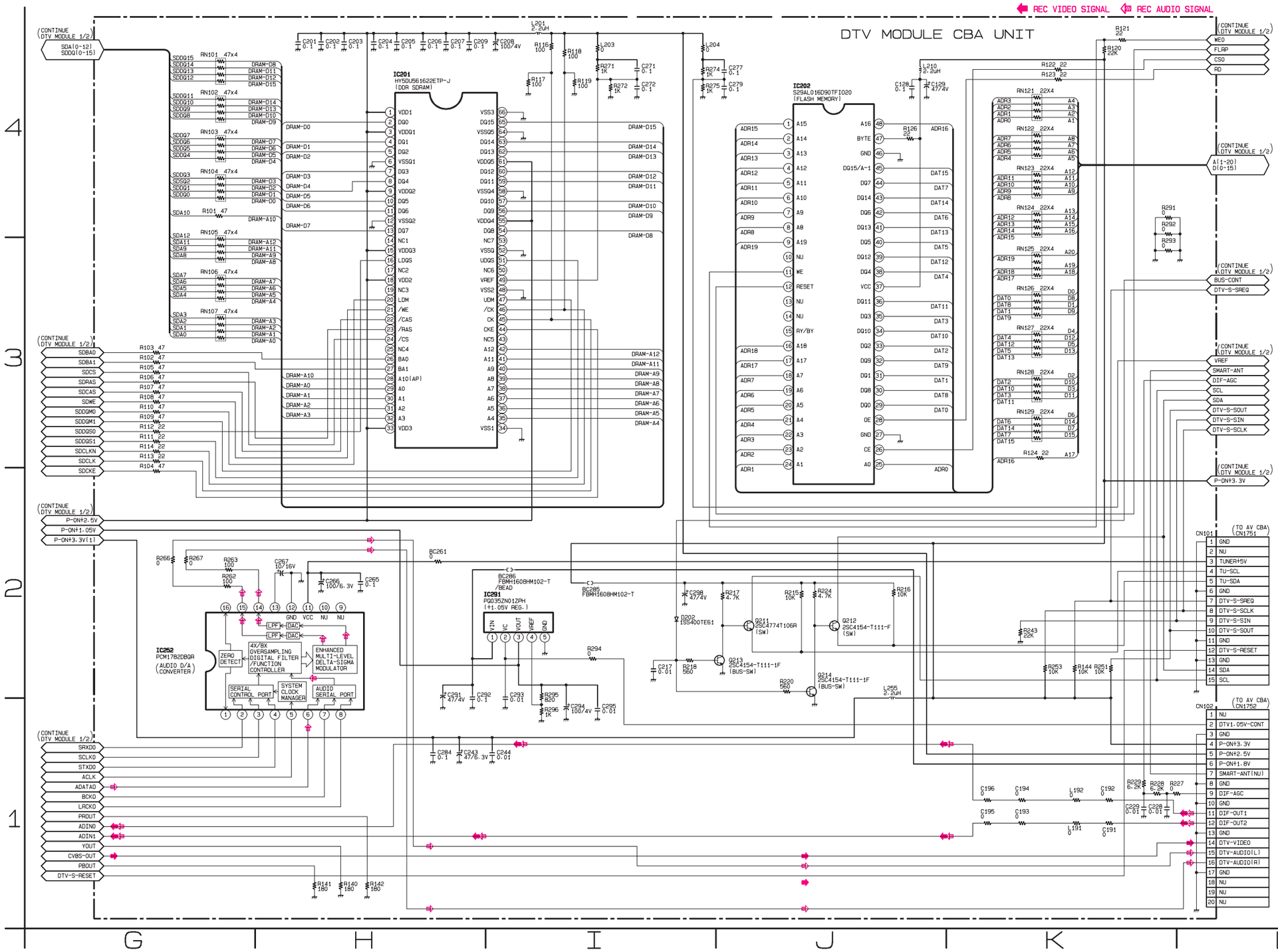
∗1 **NOTE:**
The order of pins shown in this diagram is different from that of actual IC101.
IC101 is divided into five and shown as IC101 (1/5) ~ IC101 (5/5) in this DVD Main Schematic Diagram Section.



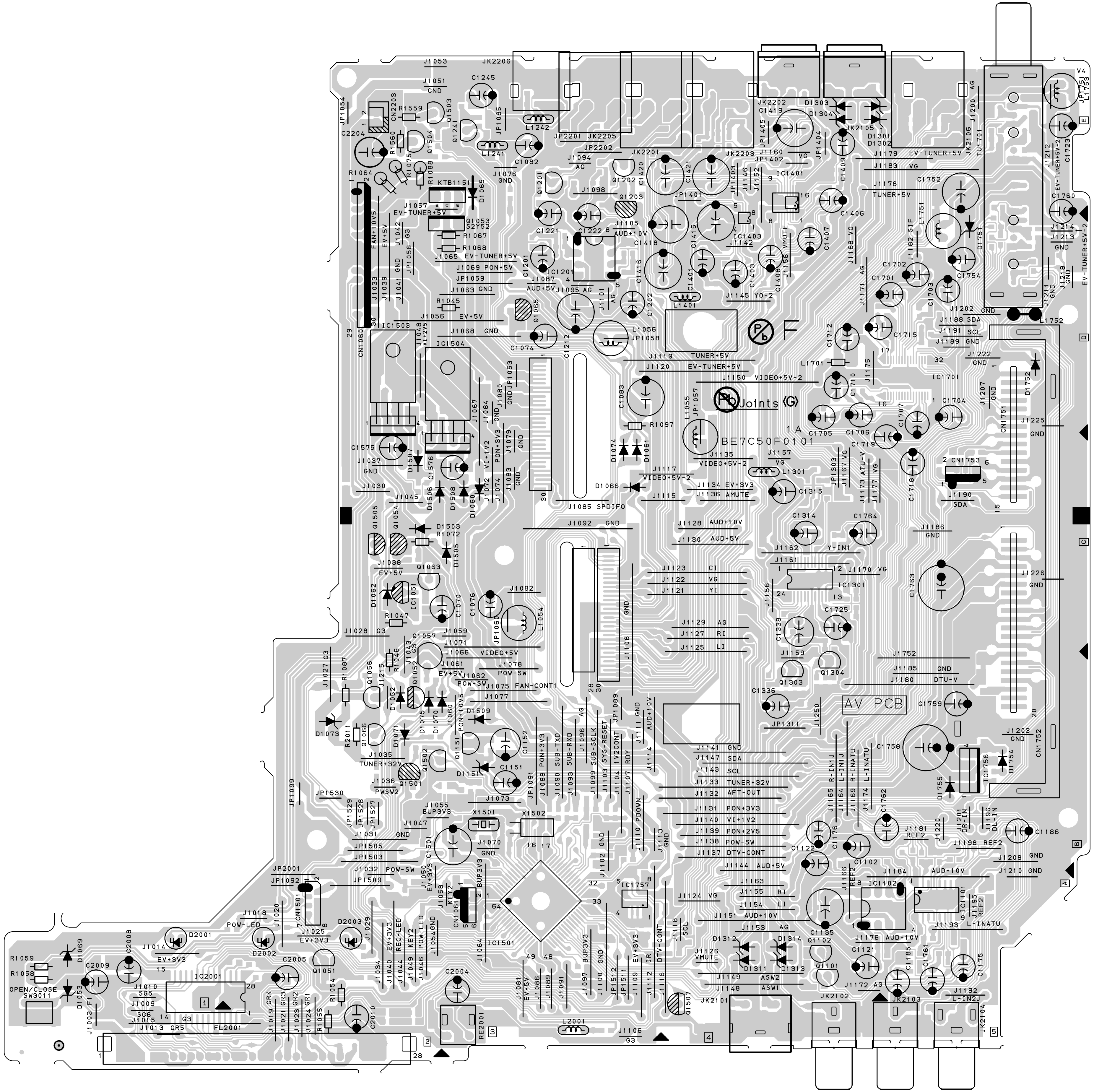
DTV Module 1/2 Schematic Diagram



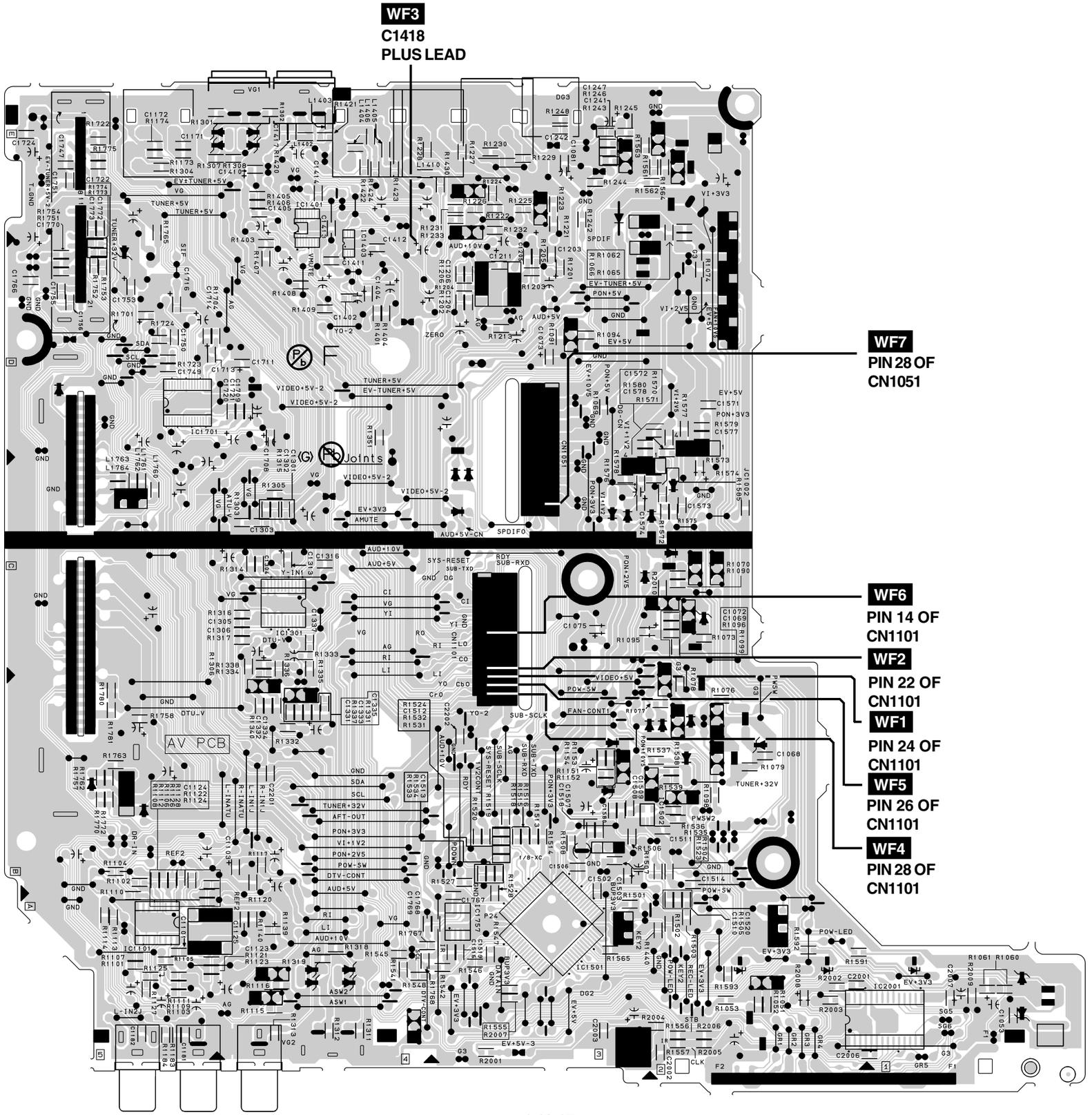
DTV Module 2/2 Schematic Diagram



AV CBA Top View



AV CBA Bottom View



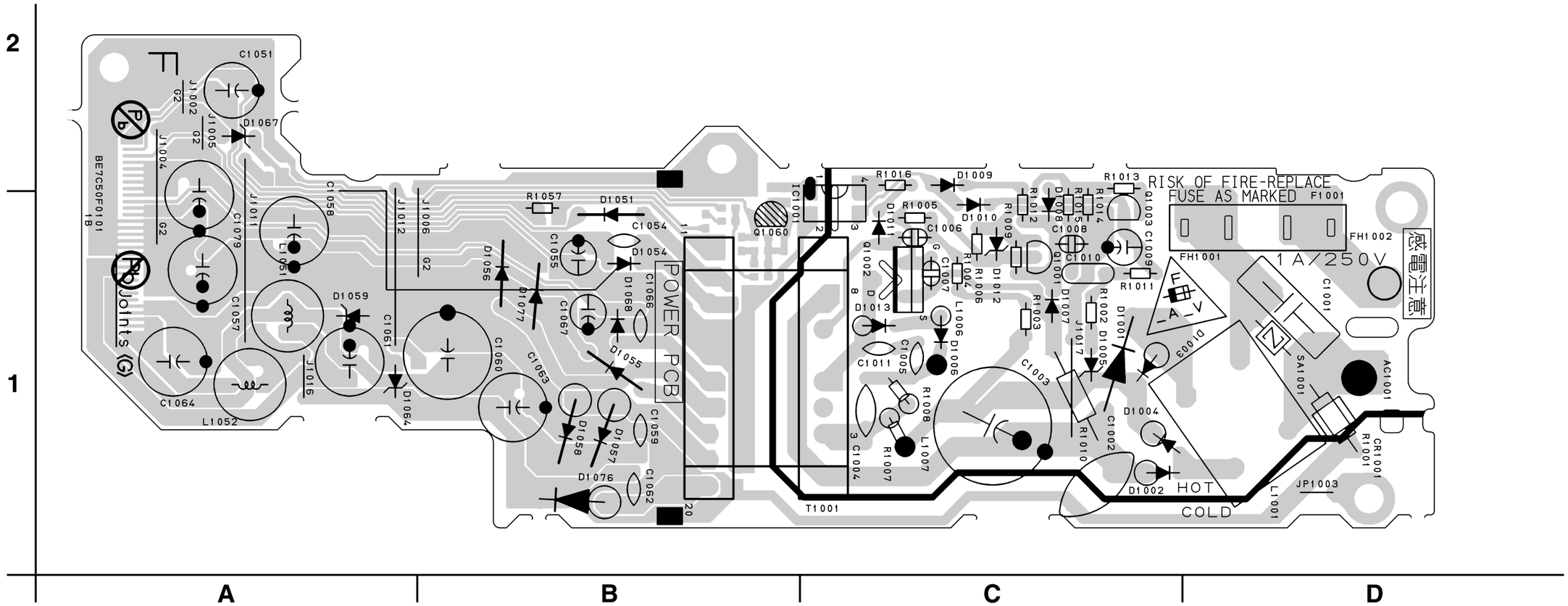
Power Supply CBA Top View

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

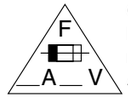
Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



Power Supply CBA Bottom View

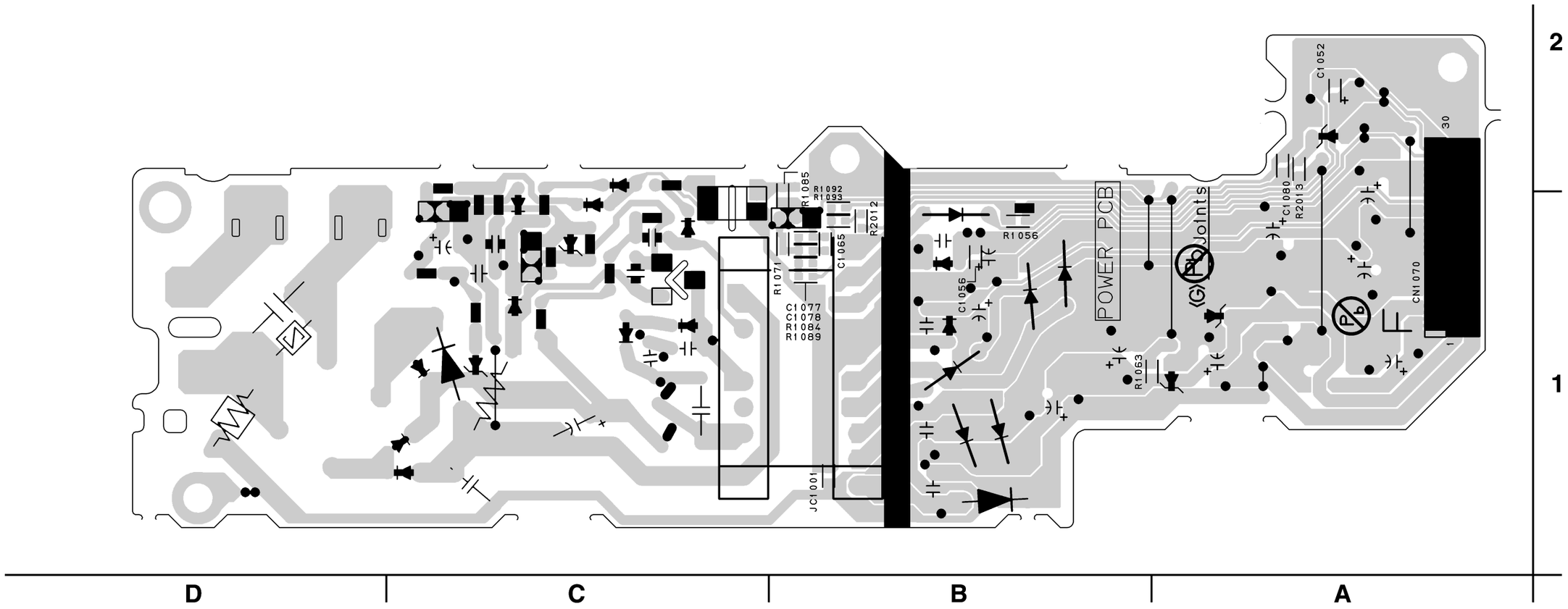
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



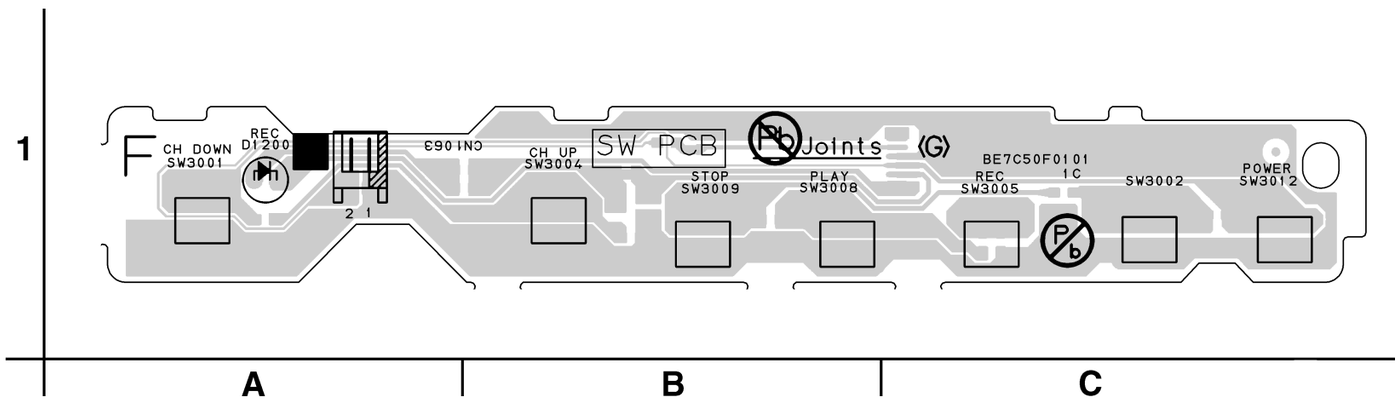
CAUTION !
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
Risk of fire-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole reprèsente un fusible à fusion rapide."

Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.

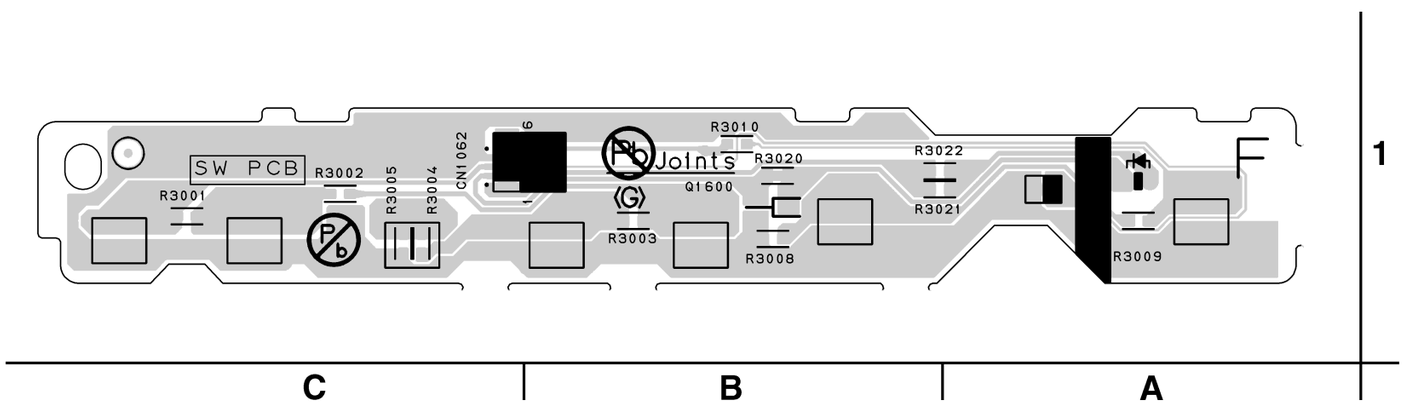
NOTE:
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



SW CBA Top View

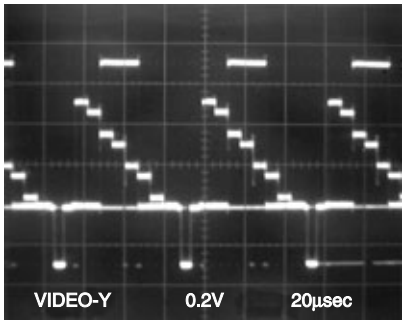


SW CBA Bottom View

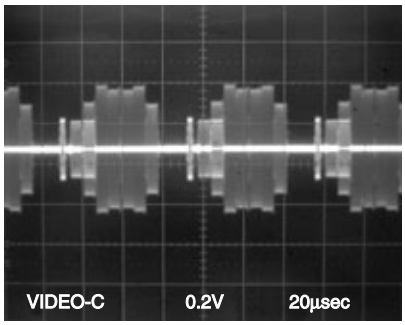


WAVEFORMS

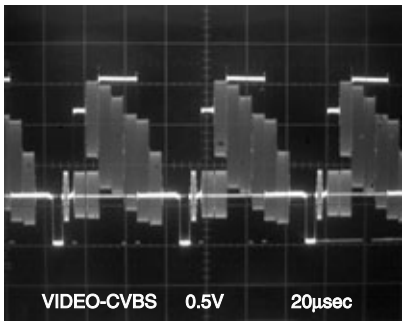
WF1 Pin 24 of CN1101



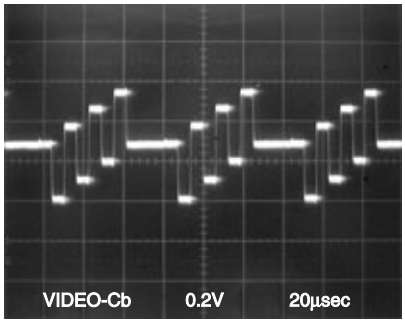
WF2 Pin 22 of CN1101



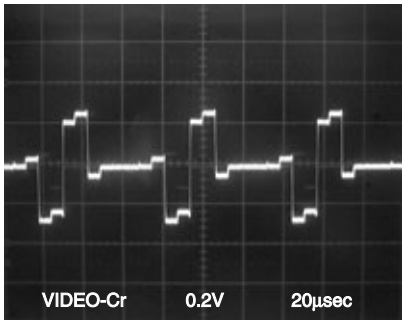
WF3 C1418 PLUS LEAD



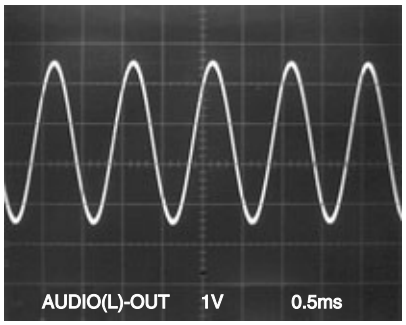
WF4 Pin 28 of CN1101



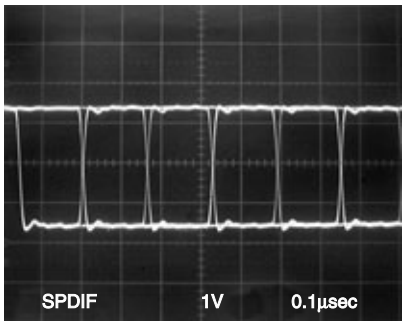
WF5 Pin 26 of CN1101



WF6 Pin 14 of CN1101

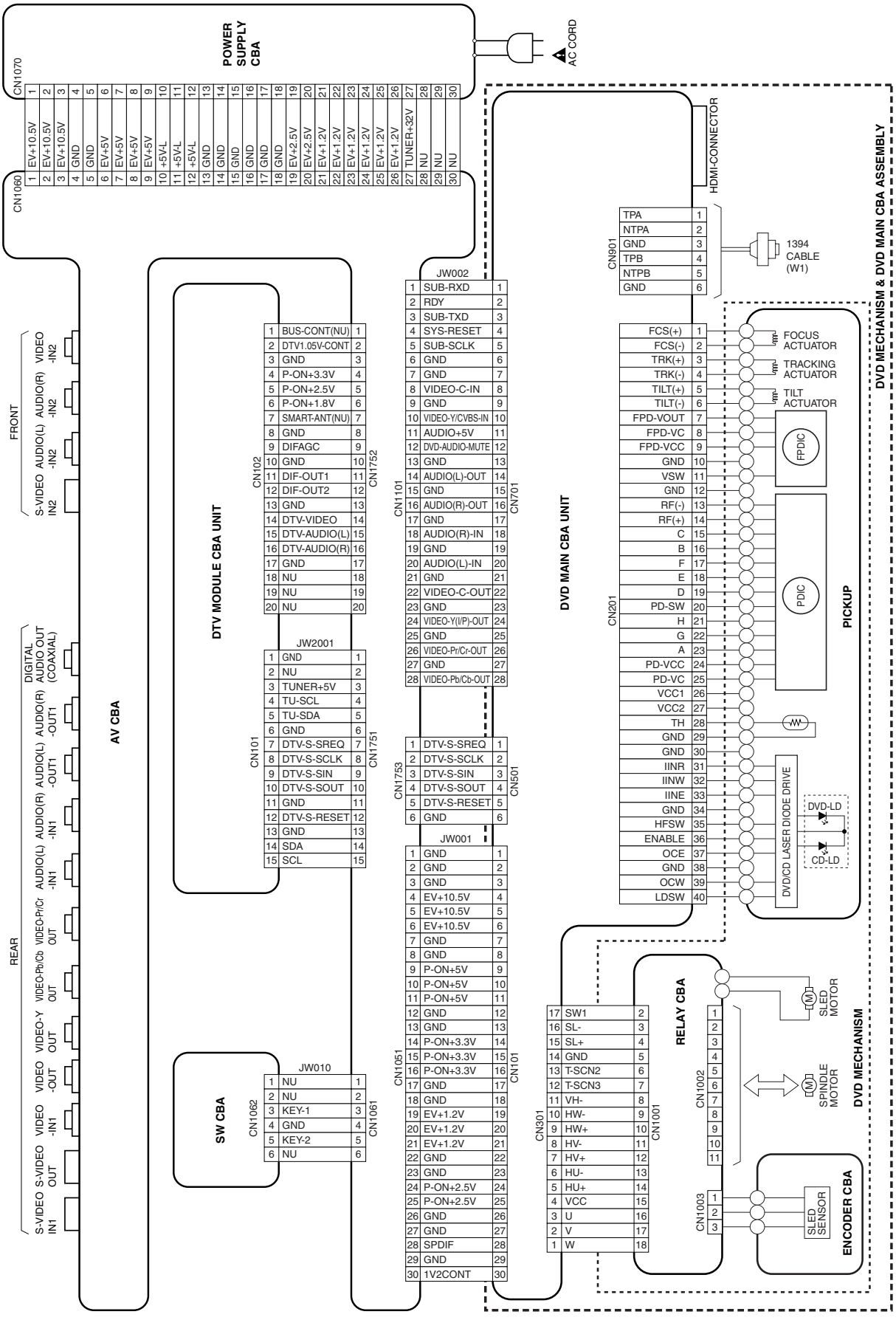


WF7 Pin 28 of CN1051

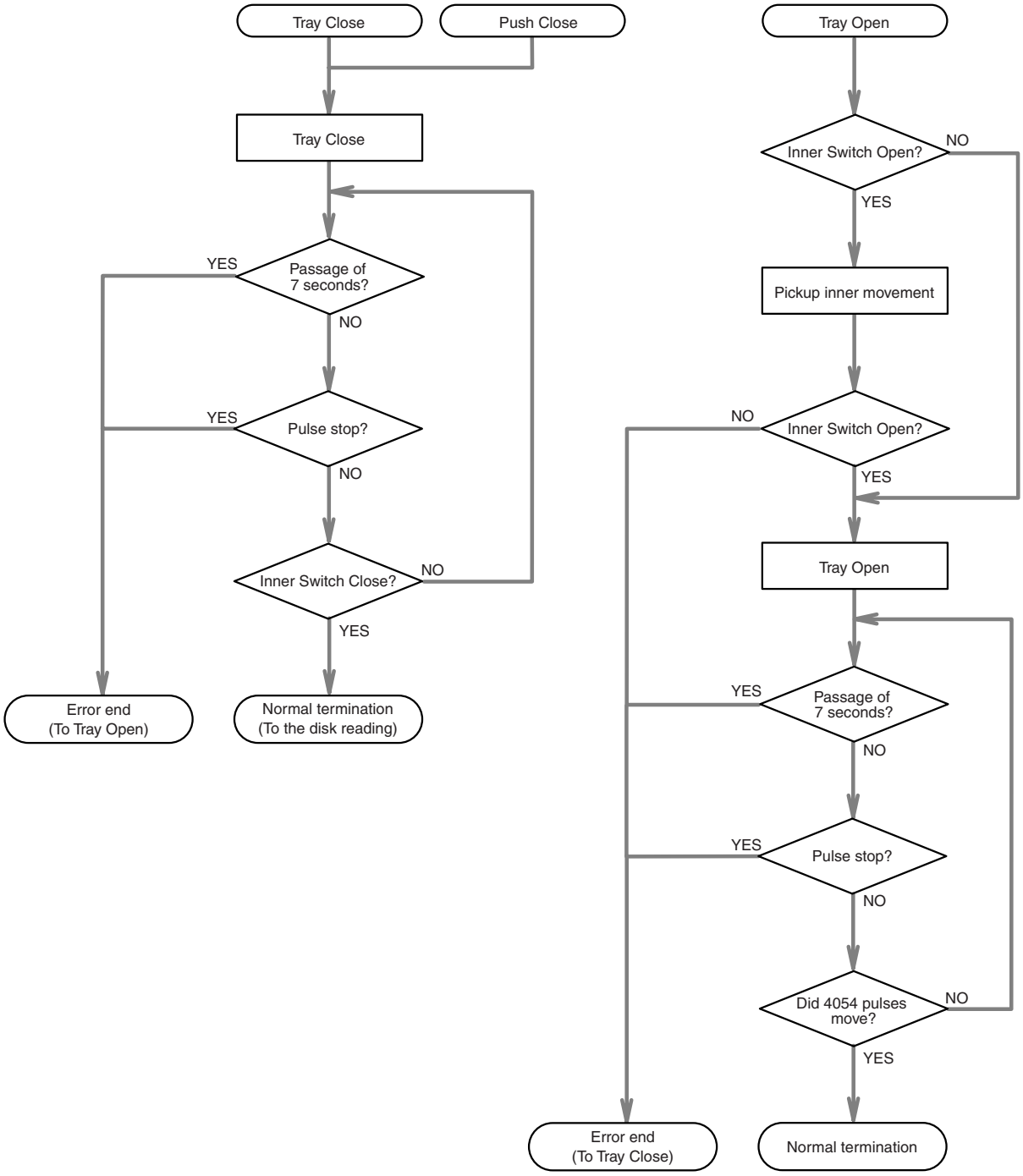


NOTE:
Input: COLOR BAR SIGNAL
(WITH 1KHz AUDIO SIGNAL)

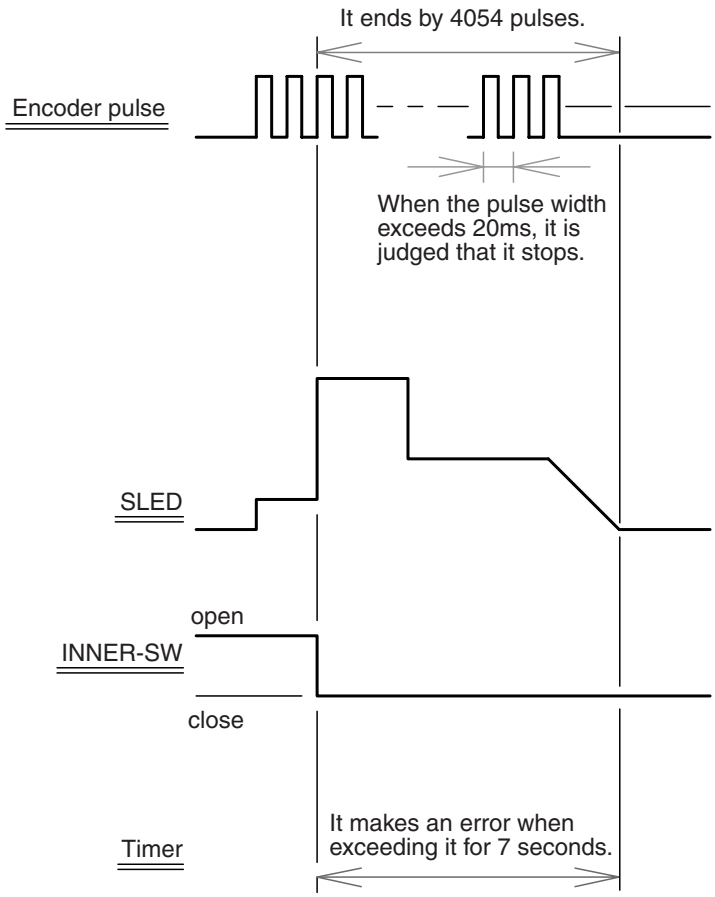
WIRING DIAGRAM



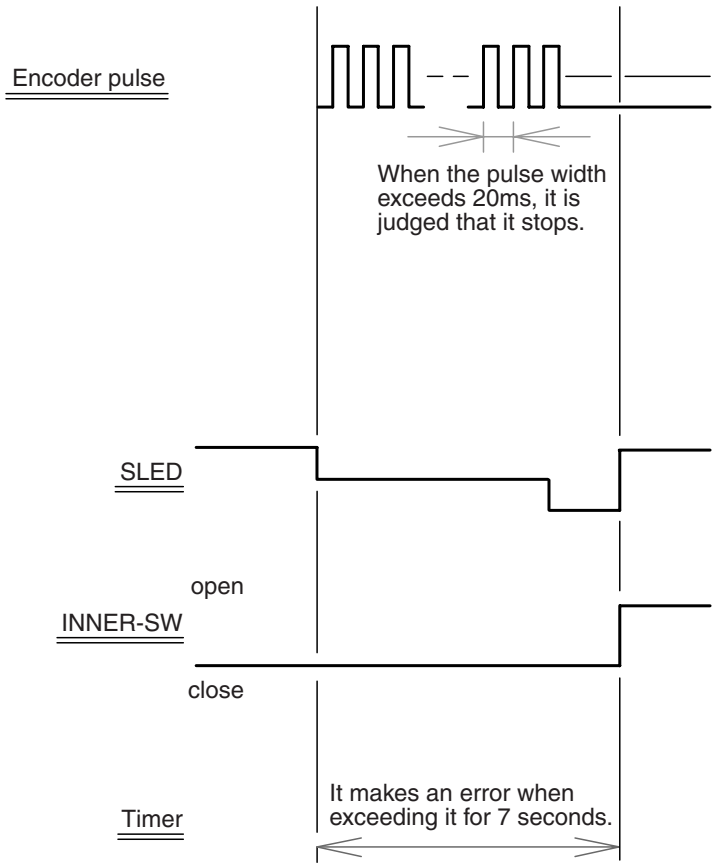
SYSTEM CONTROL TIMING CHARTS



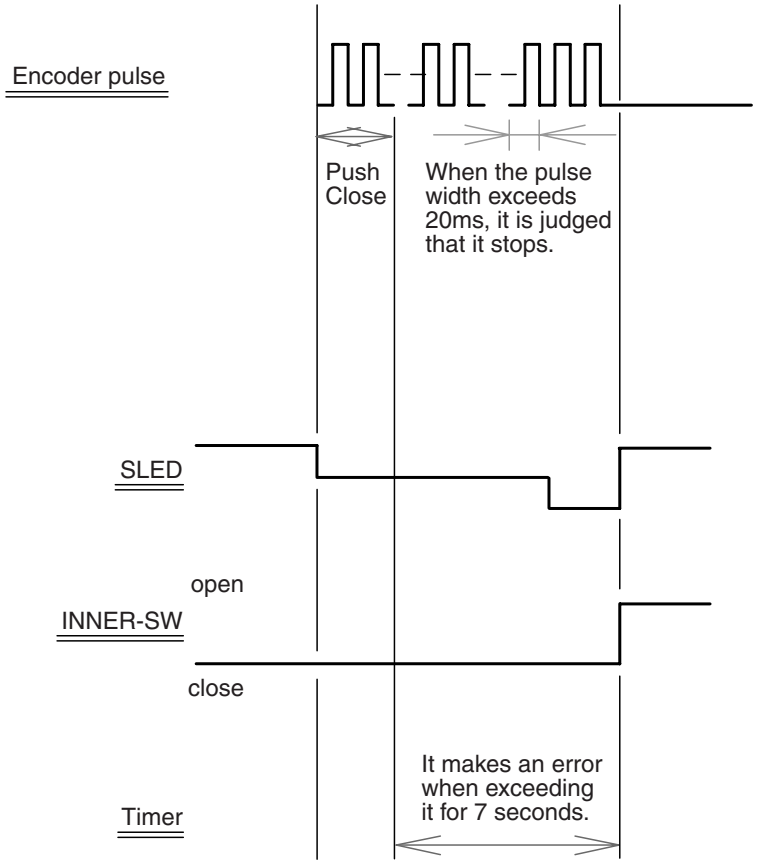
Tray open



Tray close



Push close



Parameter

Parameter	OPEN	CLOSE
The maximum movement speed	0x3200	0x3200
Pulse width of encoder in which error end is done	20ms	20ms
Number of movement encoder pulses	4054	- (Until an inner switch is turned off)
Number of deceleration beginning remainder encoder pulses	224	100

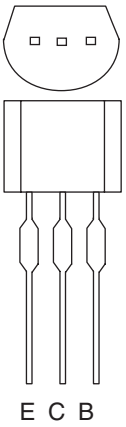
IC PIN FUNCTION DESCRIPTIONS

IC1501 (SUB MICRO CONTROLLER)

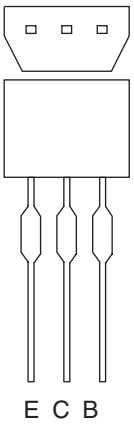
Pin No.	IN/ OUT	Signal Name	Function
1	IN	KEY-1	Key Data Input 1
2	IN	KEY-2	Key Data Input 2
3	IN	POW-SW	Abnormal Voltage Detection
4	IN	AFT	Tuner Voltage Input Signal
5	-	NU	Not Used
6	IN	EV+3.3V	+3.3V Power Supply
7	IN	VCC	+3.3V Power Supply
8	OUT	XOUT	Main Clock Output
9	IN	XIN	Main Clock Input
10	-	GND	Ground
11	IN	XCIN	Sub Clock Input
12	OUT	XCOUT	Sub Clock Output
13	-	GND	Ground
14	IN	RESET	Micro Controller Reset Signal
15	-	NU	Not Used
16	-	NU	Not Used
17	-	NU	Not Used
18	OUT	SUB-TXD	Transmission Data to Main Micro Controller
19	IN	SUB-RXD	Reception Data from Main Micro Controller
20	OUT	SUB-SCLK	Communication Clock with Main Micro Controller
21	-	NU	Not Used
22	OUT	SYS-RESET	System Reset Signal
23	-	NU	Not Used
24	-	NU	Not Used
25	-	NU	Not Used
26	OUT	1V2CONT	Power Regulator Control Signal
27	IN	REMOTE	Remote Signal Input
28	-	NU	Not Used
29	IN	RDY	Ready/Busy communication Control with Main Micro Controller
30	IN	P-DOWN	Power Voltage Down Detector Signal
31	-	NU	Not Used
32	-	NU	Not Used
33	IN/ OUT	SDA	Serial Data
34	OUT	SCL	Serial Clock
35	IN/ OUT	FLASH-SDA	Serial Data
36	OUT	FLASH-SCL	Serial Clock
37	-	NU	Not Used
38	OUT	AUDIO-MUTE	Audio Mute Control Signal
39	OUT	AUDIO-SW2	Audio Input Select Signal
40	OUT	AUDIO-SW1	Audio Input Select Signal
41	OUT	VIDEO-SW1	Video Input Select Signal
42	OUT	VIDEO-SW2	Video Input Select Signal
43	OUT	VIDEO-SW3	Video Input Select Signal
44	OUT	VIDEO-MUTE	Video Mute Control Signal
45	-	NU	Not Used
46	OUT	DTV1.09V-CONT	DTV1.05 Control Signal
47	-	NU	Not Used
48	-	NU	Not Used
49	-	NU	Not Used
50	-	NU	Not Used
51	-	NU	Not Used
52	OUT	REG-CONT	Power Regulator Control Signal
53	OUT	PWSW	Power ON Signal Output
54	-	NU	Not Used
55	-	NU	Not Used
56	-	NU	Not Used
57	-	NU	Not Used
58	OUT	LED3	Timer Record Signal
59	OUT	LED2	Record Signal
60	OUT	LED1	Power Signal
61	-	GND	Ground
62	-	NU	Not Used
63	-	NU	Not Used
64	-	NU	Not Used

LEAD IDENTIFICATIONS

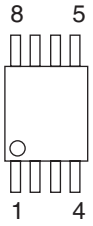
KTC3205-Y-AT/P



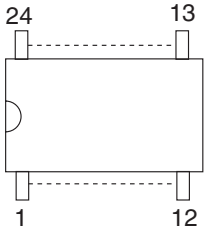
KTA1267-(GR)-AT/P
KTA1271-Y-AT/P
KTC3199-GR-AT/P
KRC103M-AT/P



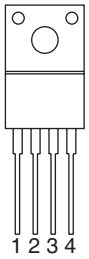
KIA4558P/P



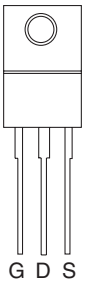
MM1697AJBE



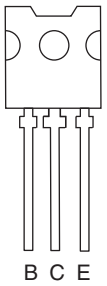
PQ070XF01SZH



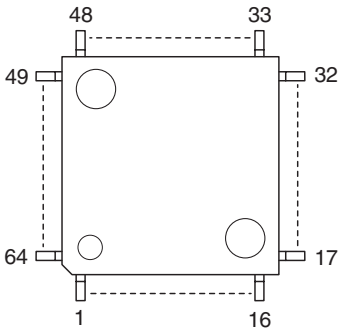
2SK3563(Q)



KTB1151-Y-U/P



MN101C77AFN



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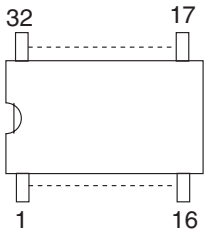
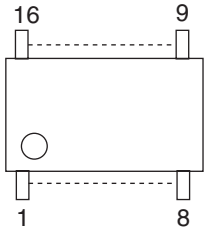
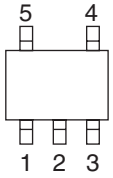


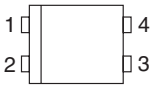
CD4052BNSR
MM1637XVBE



BU4219G-TR
R3112N191A-TR-FA
R3112N191A-TR-FB
PST3619NR

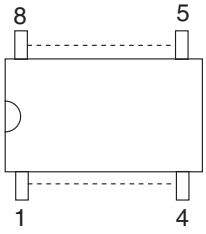


PS2561A-1(W)



1: Anode
2: Cathode
3: Emitter
4: Collector

UTC4580



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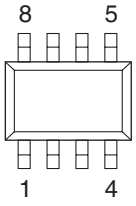
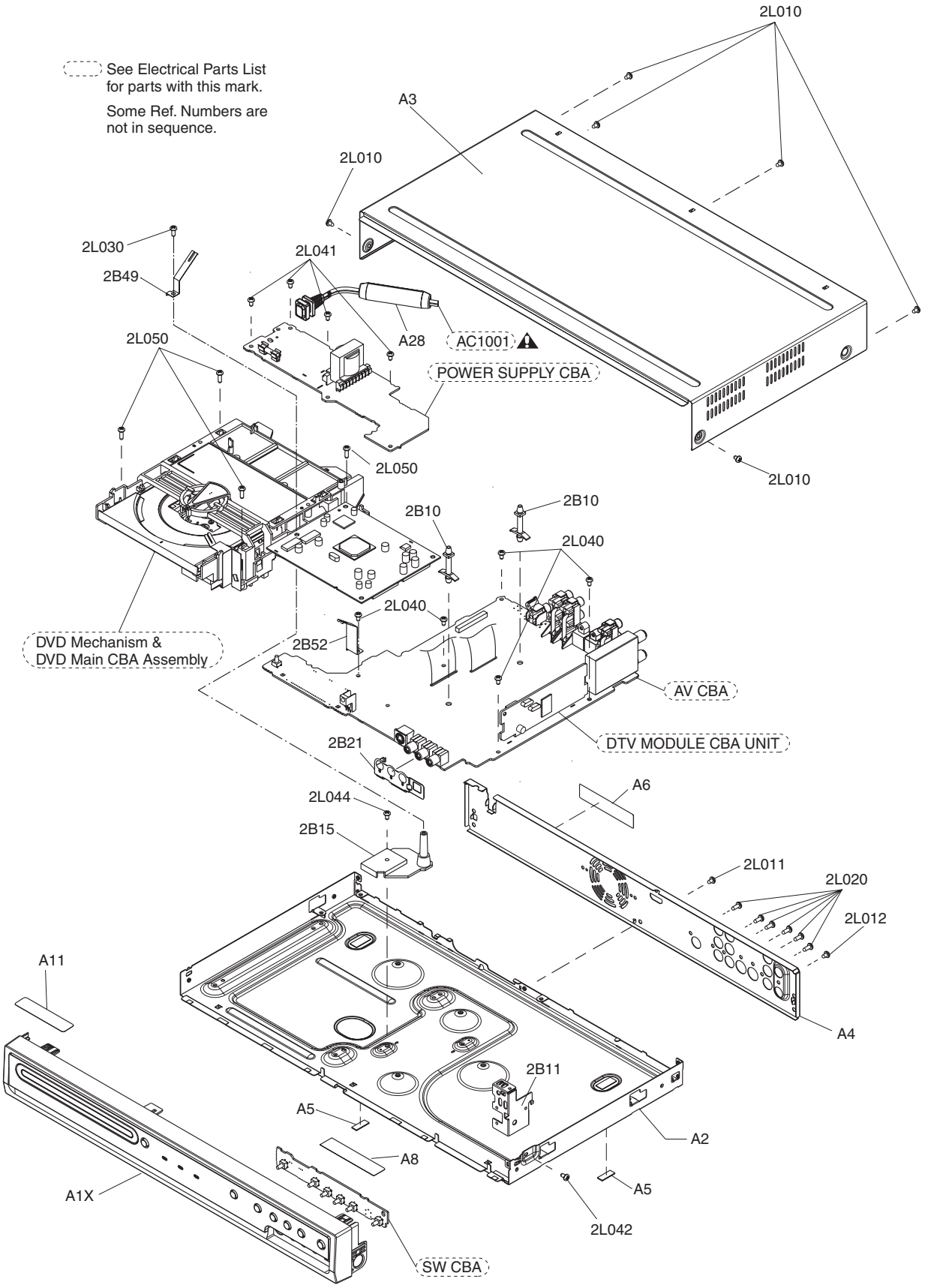


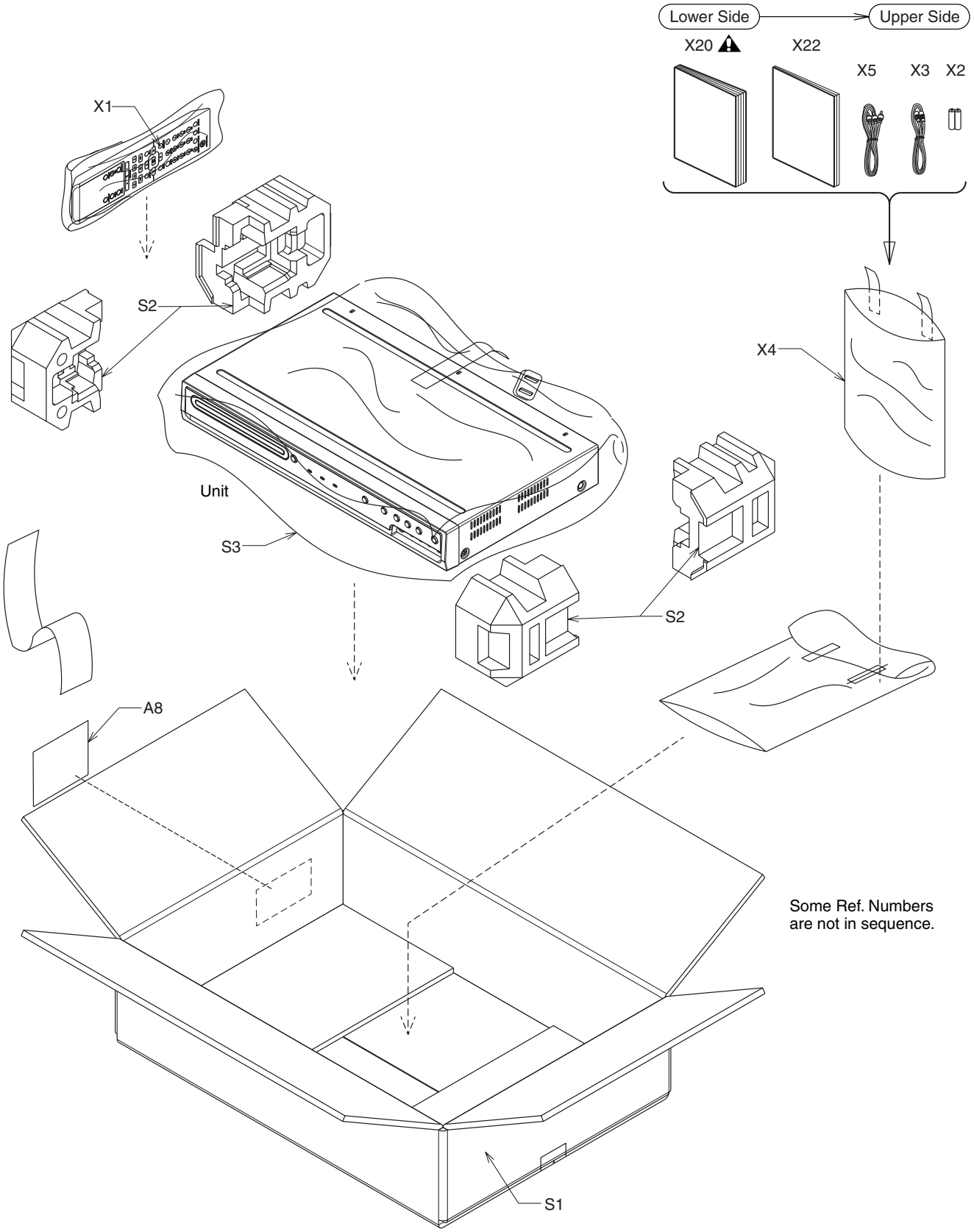
Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
G: Gate
D: Drain
S: Source

EXPLODED VIEWS

Cabinet



Packing


Lower Side
Upper Side
X20
X22
X5
X3
X2
X1
S2
X4
Unit
S3
S2
A8
S1
Some Ref. Numbers
are not in sequence.

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that are not assigned part numbers (---------) are not available.

Ref. No.	Description	Part No.
A1X	FRONT ASSEMBLY E7C50UD	1VM222829
A2	CHASSIS E7C40UD	1VM121059
A3	TOP COVER(BLACK) E7C50UD	1VM323571
A4	REAR PANEL E7C50UD	1VM222830
A5	FOOT H5100UD	0VM406940A
A6	MODEL NO LABEL E7C50UD	---------
A8	RFID LABEL(NO PRINTING) E9A80UD	---------
A11	TELEPHONE NO. LABEL H9670UD	---------
A28	HOLDER EAS(H9410UD) MAKER NO.EM150DR	0VM415877
2B10	PCB SUPPORT/PCB SPACERS KGLS-14S	XP0U027WD001
2B11	FRONT BRACKET R E2A00JD	1VM424123F
2B15	MAIN PCB HOLDER E2B10ED	1VM323176A
2B21	SHIELD A E7C40UD	1VM323576
2B49	M-PCB PLATE EARTH E6700UD	1VM421132
2B52	HEAT SINK PLATE EARTH E7A00UD	1VM423503
2L010	SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI	GBHC3050
2L011	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L012	SCREW C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L020	SCREW B-TIGHT M3X8 BIND HEAD+	GBHB3080
2L030	SCREW P-TIGHT 3X10 BIND HEAD+	GBJP3100
2L040	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L041	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L042	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L044	SCREW S-TIGHT M3X6 BIND HEAD+	GBJS3060
2L050	SCREW S-TIGHT M3X10 BIND HEAD+	GBJS3100
	PACKING	
S1	GIFT BOX CARTON E7C50UD	1VM323585
S2	SIDE PAD E7C40UD	1VM121069
S3	UNIT BAG E5500UD	0VM411683
	ACCESSORIES	
X1	REMOTE CONTROL UNIT NB553UD	NB553UD
X2	BATTERY R03-B500/01S	XB0M451CZB01
X3	RF CABLE 2.5C-2V	WPZ0901TM002
X4	ACCESSORY BAG E5795ED	0VM416059
X5	AV CORD 1000/BLACK	WPZ0102TM018
X20⚠	OWNERS MANUAL E7C50UD	1VMN23378
X22	QUICK GUIDE E7C50UD	1VMN23379

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

DVD MECHANISM & DVD MAIN CBA

Ref. No.	Description	Part No.
	DVD MECHANISM & DVD MAIN CBA ASSEMBLY	N78F8CUN

DTV MODULE CBA UNIT

Ref. No.	Description	Part No.
	DTV MODULE CBA UNIT	1VSA15405

AV ASSEMBLY

Ref. No.	Description	Part No.
	AV ASSEMBLY Consists of the following:	1VSA15419
	AV CBA (SUB-A) POWER SUPPLY CBA (SUB-B) SW CBA (SUB-C)	---------- ---------- ----------

AV CBA

Ref. No.	Description	Part No.
	AV CBA (SUB-A) Consists of the following:	----------
	CAPACITORS	
C1068	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1070	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1074	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1075	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1076	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1081	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1082	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1101	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1102	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1121	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1122	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1123	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1124	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1125	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1135	ELECTROLYTIC CAP. 220μF/16V M	CE1CMASDL221
C1151	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C1152	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C1171	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1172	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1175	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1176	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1181	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1182	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1185	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1186	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1201	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1202	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1203	CHIP CERAMIC CAP.(1608) CH J 270pF/50V	CHD1JJ3CH271
C1204	CHIP CERAMIC CAP.(1608) CH J 270pF/50V	CHD1JJ3CH271
C1205	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C1206	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C1211	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1212	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1221	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1222	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1241	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1245	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C1301	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1302	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1303	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1304	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1305	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1306	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1313	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1314	ELECTROLYTIC CAP. 22μF/16V M	CE1CMASDL220
C1315	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1316	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1331	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1332	CHIP CERAMIC CAP.(1608) CH J 33pF/50V	CHD1JJ3CH330
C1333	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1334	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1335	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1336	PCB JUMPER D0.6-P5.0	JW5.0T
C1337	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1338	ELECTROLYTIC CAP. 100μF/6.3V M NP	CP0KMASNC101
C1405	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1406	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1407	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1408	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1409	ELECTROLYTIC CAP. 22μF/16V M	CE1CMASDL220
C1410	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1411	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1413	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1414	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1415	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1417	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1418	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1419	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1420	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1421	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASDL471
C1501	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1502	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1503	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1506	CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJ3CH180
C1507	CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJ3CH180
C1508	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104

Ref. No.	Description	Part No.
If C1509 is 0.015μF, then IC1502 is R3112N191A-TR-FA, R3112N191A-TR-FB or BU4219G-TR.		
C1509	CHIP CERAMIC CAP.(1608) B K 0.015μF/50V	CHD1JK30B153
IC1502	VOLTAGE DETECT R3112N191A-TR-FA	QSZBA0TRC021
IC1502	VOLTAGE DETECT R3112N191A-TR-FB	QSZBA0TRC022
IC1502	RESET IC BU4219G-TR	QSZBA0TRM090
If C1509 is 0.1μF, then IC1502 is PST3619NR.		
C1509	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
IC1502	SYSTEM RESET IC PST3619NR	QSZBA0TMM151
C1510	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1511	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1512	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C1513	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C1520	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1575	ELECTROLYTIC CAP. 100μF/6.3V M(105C)	CE0KMASTH101
C1576	ELECTROLYTIC CAP. 100μF/6.3V M(105C)	CE0KMASTH101
C1577	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1578	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1701	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C1702	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C1703	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C1704	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C1705	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1706	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C1707	ELECTROLYTIC CAP. 3.3μF/50V M	CE1JMASDL3R3
C1708	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1709	CHIP CERAMIC CAP.(1608) B K 0.022μF/50V	CHD1JK30B223
C1710	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C1711	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1713	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1714	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1715	ELECTROLYTIC CAP. 0.33μF/50V M	CE1JMASDLR33
C1716	CHIP CERAMIC CAP.(1608) CH J 1000pF/50V	CHD1JJ3CH102
C1718	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1719	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1720	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1721	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
C1723	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1724	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1725	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C1747	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1749	CHIP CERAMIC CAP.(1608) CH J 47pF/50V	CHD1JJ3CH470
C1750	CHIP CERAMIC CAP.(1608) CH J 22pF/50V	CHD1JJ3CH220
C1751	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1752	ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASDL102
C1753	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C1754	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL1R0
C1755	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1756	CHIP CERAMIC CAP.(1608) B K 0.01μF/50V	CHD1JK30B103
C1759	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1760	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C1761	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1762	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1764	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASDL4R7
C1766	CHIP CERAMIC CAP. F Z 0.01μF/50V	CHD1JZ30F103
C1767	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C2002	CHIP CERAMIC CAP.(1608) CH J 100pF/50V	CHD1JJ3CH101
C2003	CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V	CHD1JZ30F104
C2004	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
CONNECTORS		
CN1051	AV-MAIN FFC(30PIN) WX1E7C50-004	WX1E7C50-004
CN1060	FFC CONNECTOR 30PIN IMSA-9615S-30A-PP-A	JC96J30ER007
CN1061	FFC CONNECTOR IMSA-9615S-06A-PP-A	JC96J06ER007
CN1101	AV-MAIN FFC(28PIN) WX1E7C50-005	WX1E7C50-005
CN1700	6PIN FFC WX1E7C50-001	WX1E7C50-001
CN1753	FFC CONNECTOR IMSA-9615S-06A-PP-A	JC96J06ER007
DIODES		
D1060	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1061	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1062	ZENER DIODE MTZJT-774.3A	QDTA0MTZJ4R3
D1065	PCB JUMPER D0.6-P10.0	JW10.0T
D1066	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1070	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1071	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1074	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1151	ZENER DIODE MTZJT-7711B	QDTB00MTZJ11
D1301	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1302	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1303	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1304	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1311	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1312	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1313	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1314	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D1503	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1507	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1508	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1509	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1751	ZENER DIODE MTZJT-7733B	QDTB00MTZJ33
D1754	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D2001	LED(RED) 204HD/E	NPQZ00204HDE
D2002	LED(RED) 204HD/E	NPQZ00204HDE
D2003	LED(YELLOW) 204YD/E	NPQZ00204YDE
ICS		
IC1101	IC SWITCHING CD4052BNSR	NSZBA0TTY091
IC1102	IC OP AMP UTC4580 DIP-8 8PIN	NSZBA0S2H003
IC1201	IC OP AMP KIA4558P/P	NSZBA0SJY035
IC1301	VIDEO SWITCH MM1697AJBE	QSZBA0TMM150
IC1401	DRIVER FOR DVD MM1637XVBE	QSZBA0TMM102
IC1501	MICROCONTROLLER MN101C77AFN	QSZAA0RMS075
If IC1502 is R3112N191A-TR-FA, R3112N191A-TR-FB or BU4219G-TR, then C1509 is 0.015μF.		
IC1502	VOLTAGE DETECT R3112N191A-TR-FA	QSZBA0TRC021
IC1502	VOLTAGE DETECT R3112N191A-TR-FB	QSZBA0TRC022
IC1502	RESET IC BU4219G-TR	QSZBA0TRM090
C1509	CHIP CERAMIC CAP.(1608) B K 0.015μF/50V	CHD1JK30B153
If IC1502 is PST3619NR, then C1509 is 0.1μF.		
IC1502	SYSTEM RESET IC PST3619NR	QSZBA0TMM151
C1509	CHIP CERAMIC CAP.(1608) B K 0.1μF/25V	CHD1EK30B104
IC1503	VOLTAGE REGULATOR PQ070XF01SZH	QSZBA0SSH054
IC1504	VOLTAGE REGULATOR PQ070XF01SZH	QSZBA0SSH054
IC1701	IC MTS DECORDER AN5832SA-E1V	QSZBA0TMS003
IC1756	VOLTAGE REGULATOR PQ070XF01SZH	QSZBA0SSH054
IC1757	EEP-ROM 128K M24128-BWMN6TP	NSZBA0TSS268
COILS		
L1054	CHOKE COIL 22μH-K	LLBD00PKV021
L1055	CHOKE COIL 22μH-K	LLBD00PKV021
L1056	CHOKE COIL 22μH-K	LLBD00PKV021
L1241	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
L1242	INDUCTOR(0.47μH K) LAP02TAR47K	LLAXKATTUR47
L1301	PCB JUMPER D0.6-P5.0	JW5.0T
L1401	PCB JUMPER D0.6-P5.0	JW5.0T
L1701	CARBON RES. 1/4W J 3.3 Ω	RCX4JATZ03R3
L1751	CHOKE COIL 22μH-K	LLBD00PKV021
L1752	BEAD INDUCTOR FBR07HA121TB-00	LLBF00ZTU021

Ref. No.	Description	Part No.
L1753	CHOKE COIL 22μH-K	LLBD00PKV021
L1760	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1761	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1762	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1763	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1764	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L2001	INDUCTOR(100μH K) LAP02TA101K	LLAXKATTU101
	TRANSISTORS	
Q1053	TRANSISTOR KTB1151-Y-U/P	NQEY0KTB1151
Q1054	TRANSISTOR (PB FREE) KTA1271-Y-AT/P	NQSYKTA1271P
Q1056	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1057	TRANSISTOR KTC3205-Y-AT/P	NQSYKTC3205P
Q1063	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1065	TRANSISTOR (PB FREE) KTA1271-Y-AT/P	NQSYKTA1271P
Q1101	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1102	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1151	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1201	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1202	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1203	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1241	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1303	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1304	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1501	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
Q1502	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1505	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
Q1507	NPN TRANSISTOR KRC103M-AT/P	NQSZKRC103MP
	RESISTORS	
R1066	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1067	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1068	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1070	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1072	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R1073	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1074	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R1076	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1077	CHIP RES. 1/10W J 1.1k Ω	RRXAJR5Z0112
R1087	CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R1090	CHIP RES. 1/10W J 1.8k Ω	RRXAJR5Z0182
R1094	CHIP RES. 1/10W J 120 Ω	RRXAJR5Z0121
R1101	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1102	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1103	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1104	CHIP RES.(1608) 1/10W F 68k Ω	RRXAFR5H0683
R1105	CHIP RES.(1608) 1/10W F 62k Ω	RRXAFR5H0623
R1106	CHIP RES.(1608) 1/10W F 62k Ω	RRXAFR5H0623
R1107	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1108	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1109	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1110	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1111	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1112	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1113	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1114	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1115	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1116	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1117	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1120	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R1121	CHIP RES.(1608) 1/10W F 33k Ω	RRXAFR5H0333
R1122	CHIP RES.(1608) 1/10W F 33k Ω	RRXAFR5H0333
R1125	CHIP RES. 1/10W F 43k Ω	RRXAFR5H0433
R1126	CHIP RES. 1/10W F 43k Ω	RRXAFR5H0433

Ref. No.	Description	Part No.
R1127	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1128	CHIP RES. 1/10W J 18k Ω	RRXAJR5Z0183
R1139	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
R1140	CHIP RES. 1/10W J 750 Ω	RRXAJR5Z0751
R1151	CHIP RES. 1/10W J 110 Ω	RRXAJR5Z0111
R1173	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1174	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1183	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1184	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1201	CHIP RES.(1608) 1/10W F 8.2k Ω	RRXAFR5H0822
R1202	CHIP RES.(1608) 1/10W F 8.2k Ω	RRXAFR5H0822
R1203	CHIP RES. 1/10W J 13k Ω	RRXAJR5Z0133
R1204	CHIP RES. 1/10W J 13k Ω	RRXAJR5Z0133
R1205	CHIP RES.(1608) 1/10W F 13k Ω	RRXAFR5H0133
R1206	CHIP RES.(1608) 1/10W F 13k Ω	RRXAFR5H0133
R1213	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1221	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1222	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1223	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1224	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1225	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1226	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1227	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1228	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1231	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1232	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1233	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1242	CHIP RES. 1/10W J 1.8k Ω	RRXAJR5Z0182
R1243	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1244	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1245	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1246	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1248	CHIP RES. 1/10W J 100k Ω	RRXAJR5Z0104
R1304	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1307	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1308	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1313	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1318	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1319	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1331	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1333	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1334	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471
R1335	CHIP RES. 1/10W J 3k Ω	RRXAJR5Z0302
R1336	CHIP RES. 1/10W J 12k Ω	RRXAJR5Z0123
R1337	CHIP RES. 1/10W J 3k Ω	RRXAJR5Z0302
R1338	CHIP RES. 1/10W J 12k Ω	RRXAJR5Z0123
R1405	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1406	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1407	CHIP RES.(1608) 1/10W F 200 Ω	RRXAFR5H0201
R1408	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1409	CHIP RES.(1608) 1/10W F 220 Ω	RRXAFR5H0221
R1420	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1421	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1422	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1423	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1424	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1430	CHIP RES. 1/10W J 75 Ω	RRXAJR5Z0750
R1501	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1502	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1503	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1505	CHIP RES. 1/10W J 820k Ω	RRXAJR5Z0824
R1506	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1507	CHIP RES. 1/10W J 470 Ω	RRXAJR5Z0471

Ref. No.	Description	Part No.
R1508	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1513	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1514	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1515	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1516	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1518	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1519	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1520	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1523	CHIP RES. 1/10W J 470k Ω	RRXAJR5Z0474
R1524	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1527	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1528	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1531	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1532	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1533	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R1534	CHIP RES. 1/10W J 22k Ω	RRXAJR5Z0223
R1535	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1536	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1537	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1538	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1539	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R1541	CHIP RES. 1/10W J 5.6k Ω	RRXAJR5Z0562
R1542	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1545	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R1546	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1547	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1548	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1565	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1570	CHIP RES. 1/10W J 2.7k Ω	RRXAJR5Z0272
R1571	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1572	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R1573	CHIP RES.(1608) 1/10W F 1.5k Ω	RRXAFR5H0152
R1574	CHIP RES.(1608) 1/10W F 120 Ω	RRXAFR5H0121
R1575	CHIP RES. 1/10W F 15k Ω	RRXAFR5H0153
R1576	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1577	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1578	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1579	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1580	CHIP RES. 1/10W J 47k Ω	RRXAJR5Z0473
R1591	CHIP RES. 1/10W J 120 Ω	RRXAJR5Z0121
R1592	CHIP RES. 1/10W J 120 Ω	RRXAJR5Z0121
R1593	CHIP RES. 1/10W J 120 Ω	RRXAJR5Z0121
R1701	CHIP RES. 1/10W J 180k Ω	RRXAJR5Z0184
R1704	CHIP RES. 1/10W J 3.3k Ω	RRXAJR5Z0332
R1723	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1724	CHIP RES. 1/10W J 220 Ω	RRXAJR5Z0221
R1752	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1753	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1758	CHIP RES. 1/10W J 390 Ω	RRXAJR5Z0391
R1762	CHIP RES.(1608) 1/10W F 4.3k Ω	RRXAFR5H0432
R1763	CHIP RES.(1608) 1/10W F 10k Ω	RRXAFR5H0103
R1767	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1768	CHIP RES. 1/10W J 100 Ω	RRXAJR5Z0101
R1770	CHIP RES. 1/10W J 1.1k Ω	RRXAJR5Z0112
R1772	CHIP RES. 1/10W J 1.1k Ω	RRXAJR5Z0112
R1775	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2001	CHIP RES. 1/10W J 33 Ω	RRXAJR5Z0330
R2004	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R2010	CHIP RES. 1/10W J 27 Ω	RRXAJR5Z0270
R2011	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
	SWITCH	
SW3011	TACT SWITCH SKQSAF001A	SST0101AL041

Ref. No.	Description	Part No.
	MISCELLANEOUS	
JC1002	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
JK2101	DIN SOCKET DIN-405A	JXEL040YUQ03
JK2102	RCA JACK(YELLOW) MTJ-032-05B-20(B110)	JXRL010LY135
JK2103	RCA JACK(WHITE) MTJ-032-05B-22(B110)	JXRL010LY136
JK2104	RCA JACK(RED) MTJ-032-05A-21(B110)	JYRL010LY029
JK2105	S TYPE JACK MDC-050V-2.4 LF(B110	JXEL040LY003
JK2106	RCA JACK 3PIN MSD-243V-07 NI FE LF	JXRL030LY124
JK2201	RCA JACK 3PIN MSD-243V-07 NI FE LF	JXRL030LY124
JK2202	S TYPE JACK MDC-050V-2.4 LF(B110	JXEL040LY003
JK2203	RCA JACK 3PIN MSD-243V-18 NI FE LF	JXRL030LY132
JK2206	RCA JACK(BLACK) MSP-251V-01 NI FE LF	JXRL010LY125
JP1054	PCB JUMPER D0.6-P5.0	JW5.0T
JP1059	PCB JUMPER D0.6-P12.5	JW12.5T
JP1091	PCB JUMPER D0.6-P20.0	JW20.0T
JP1092	PCB JUMPER D0.6-P5.0	JW5.0T
JP1303	PCB JUMPER D0.6-P9.0	JW9.0T
JP1311	PCB JUMPER D0.6-P9.5	JW9.5T
JP1402	PCB JUMPER D0.6-P5.0	JW5.0T
JP1404	PCB JUMPER D0.6-P5.0	JW5.0T
JP1405	PCB JUMPER D0.6-P5.0	JW5.0T
JP1528	PCB JUMPER D0.6-P5.0	JW5.0T
JP1529	PCB JUMPER D0.6-P5.0	JW5.0T
RE2001	SENSOR REMOTE RECEIVER KSM-602LU2S	USESJRSKK048
TU1701	TUNER 115U1003AF	UTUNNTUSP033
X1501	CERAMIC RESONATOR ZTT8.00MT47	FY0805PLN004
X1502	XTAL DT38 32.768kHz	FX0323LDS001

POWER SUPPLY CBA

Ref. No.	Description	Part No.
	POWER SUPPLY CBA (SUB-B) Consists of the following:	----------
	CAPACITORS	
C1001⚠	ACROSS THE LINE CAP. 0.1U/275V	CT2E104DC016
C1002⚠	SAFETY CAP. 3300pF/250V	CCD2EMA0E332
C1003	ELECTROLYTIC CAPACITOR ZR200TA221K18EB	CA2D221DYG04
C1004	CERAMIC CAP. B K 0.01μF/500V	CCD2JKP0B103
C1005	CERAMIC CAP. B K 220pF/500V	CCD2JKP0B221
C1006	CERAMIC CAP.(AX) X K 5600pF/16V	CCA1CKT0X562
C1008	CERAMIC CAP.(AX) B K 0.0056μF/50V	CA1J562TU011
C1009	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1010	POLYESTER FILM CAP. (PB FREE) 0.022μF/ 100V J	CA2A223DT018
C1011	CERAMIC CAP. B K 220pF/500V	CCD2JKP0B221
C1057	ELECTROLYTIC CAP. 2200μF/6.3V M(105C)	CE0KMASTH222
C1058	ELECTROLYTIC CAP. 3300μF/6.3V M(105C)	CE0KMZATH332
C1059	CERAMIC CAP. CH J 47pF/50V	CCD1JJSCH470
C1060	ELECTROLYTIC CAP. 4700μF/6.3V M(105C)	CE0KMZATH472
C1061	ELECTROLYTIC CAP. 3300μF/6.3V M(105C)	CE0KMZATH332
C1063	ELECTROLYTIC CAP. 1000μF/16V M(105C)	CE1CMASTH102
C1064	ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C1065	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1066	CERAMIC CAP. B K 220pF/500V	CCD2JKP0B221
C1067	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C1077	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1078	CHIP CERAMIC CAP.(1608) B K 0.033μF/50V	CHD1JK30B333
C1079	ELECTROLYTIC CAP. 3300μF/6.3V M(105C)	CE0KMZATH332
C1080	CHIP CERAMIC CAP.(1608) B K 1μF/10V	CHD1AK30B105
	CONNECTOR	
CN1070	30PIN FFC WX1E7C00-002	WX1E7C00-002
	DIODES	
D1001	DIODE 1N5397-B	NDLZ001N5397

Ref. No.	Description	Part No.
D1002	DIODE 1N5397-B	NDLZ001N5397
D1003	DIODE 1N5397-B	NDLZ001N5397
D1004	DIODE 1N5397-B	NDLZ001N5397
D1005	PCB JUMPER D0.6-P5.0	JW5.0T
D1006	RECTIFIER DIODE BA157	NDQZ000BA157
D1007	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1008	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1009	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1010	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1011	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1012	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D1013	RECTIFIER DIODE BA157	NDQZ000BA157
D1055	SCHOTTKY BARRIER DIODE SB240-B/P	NDWZ000SB240
D1056	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D1057	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D1058	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D1059	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D1063	RECTIFIER DIODE FR302	NDWZ000FR302
D1064	ZENER DIODE MTZJT-7713B	QDTB00MTZJ13
D1067	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D1068	RECTIFIER DIODE BA157	NDQZ000BA157
D1077	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
	IC	
IC1001⚠	PHOTOCOUPLER PS2561A-1(W)	QPEWPS2561A1
	COILS	
L1001⚠	LINE FILTER 26MH HF2316-A263Y0R6-01	LLEG0Z0TE001
L1006	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1007	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1051	COIL SEALED POWER INDUCTORS CWKBNP-470K	LLF4700KV002
L1052	POWER INDUCTORS CWKBNP-180K	LLF1800KV002
	TRANSISTORS	
Q1001	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1002⚠	FET MOS 2SK3563(Q)	QFWZ2SK3563Q
Q1003	TRANSISTOR KTC3199-GR-AT/P	NQS4KTC3199P
Q1060	TRANSISTOR KTA1267-GR-AT/P	NQS1KTA1267P
	RESISTORS	
R1001⚠	CARBON RES. 1/2W J 3.3M Ω	RCX2335DP001
R1002	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R1003	CARBON RES. 1/4W J 1.8M Ω	RCX4JATZ0185
R1004	CARBON RES. 1/4W J 1.8M Ω	RCX4JATZ0185
R1005	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R1006	CARBON RES. 1/4W J 820k Ω	RCX4JATZ0824
R1007	METAL OXIDE FILM RES. 2W J 2.2 Ω	RN02JZLZ02R2
R1008	METAL OXIDE FILM RES.(STRAIGHT 1W J 15k Ω	RN01JZLZ0153
R1009	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R1010	METAL RESISTER. 2W J 0.56 Ω	RN02R56ZU001
R1011	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1012	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1013	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1014	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R1015	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R1016	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R1063	CHIP RES. 1/10W J 10 Ω	RRXAJR5Z0100
R1084	CHIP RES. 1/10W J 15k Ω	RRXAJR5Z0153
R1085	CHIP RES. 1/10W J 1.8k Ω	RRXAJR5Z0182
R1089	CHIP RES. 1/10W J 4.7k Ω	RRXAJR5Z0472
R1092	CHIP RES. 1/10W F 5.6k Ω	RRXAFR5H0562
R1093	CHIP RES.(1608) 1/10W F 2.7k Ω	RRXAFR5H0272
R1097	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R2012	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2013	CHIP RES. 1/10W J 1.8k Ω	RRXAJR5Z0182

Ref. No.	Description	Part No.
	MISCELLANEOUS	
AC1001⚠	AC CORD W/O A GND WIRE UL/CSA/1660/NO/ BLACK	WAC0162LW010
F1001⚠	FUSE CURRENT PEG20C0NG001	PEG20C0NG001
FH1001	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
FH1002	FUSE HOLDER MSF-015 LF (B110)	XH01Z00LY002
JP1003	PCB JUMPER D0.6-P5.0	JW5.0T
T1001⚠	SWITCHING TRANS 6755-S05	LTT2PC0KT014

SW CBA

Ref. No.	Description	Part No.
	SW CBA (SUB-B) Consists of the following:	---------
	CONNECTOR	
CN1062	SW-AV FFC(6PIN) WX1E7C00-003	WX1E7C00-003
	RESISTORS	
R3001	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
R3002	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R3003	CHIP RES. 1/10W J 1k Ω	RRXAJR5Z0102
R3004	CHIP RES. 1/10W J 2.2k Ω	RRXAJR5Z0222
R3005	CHIP RES. 1/10W J 6.8k Ω	RRXAJR5Z0682
R3008	CHIP RES. 1/10W J 10k Ω	RRXAJR5Z0103
R3009	CHIP RES. 1/10W J 620 Ω	RRXAJR5Z0621
R3010	CHIP RES. 1/10W J 300 Ω	RRXAJR5Z0301
	SWITCHES	
SW3001	TACT SWITCH SKQSAF001A	SST0101AL041
SW3004	TACT SWITCH SKQSAF001A	SST0101AL041
SW3005	TACT SWITCH SKQSAF001A	SST0101AL041
SW3008	TACT SWITCH SKQSAF001A	SST0101AL041
SW3009	TACT SWITCH SKQSAF001A	SST0101AL041
SW3012	TACT SWITCH SKQSAF001A	SST0101AL041

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